



NOVA SCOTIA INFORMATION PROFILE

Nova Scotia



**Department of
Industry, Trade
and Technology**

**Nova Scotia
Information Profile**

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This publication has been prepared by the Industrial Promotion Branch of the Nova Scotia Department of Industry, Trade and Technology.

It has been written to provide the busy executive with a quick overview of the investment climate, business incentives, taxation rules, etc. in Nova Scotia.

Every effort has been made to secure a high level of accuracy in presenting the information contained in this profile. Nevertheless, we suggest that any individuals and/or companies doing business in Nova Scotia -- or planning to do so -- discuss these matters further with experienced Canadian professionals (chartered accountants, lawyers, management consultants, etc.).

Table of Contents

1	Nova Scotia Overview				
	Nova Scotia.....	1.1		Distribution of	
	Historical Sketch.....	1.2		Union Members.....	5.7
	Map.....	1.3		Employee Benefits.....	5.8
	Selected Economic Indicators.....	1.4		Employer Costs of Employee	
	Population of Cities and Towns.....	1.5		Fringe Benefits.....	5.9
	Population by County.....	1.6		Nova Scotia Training and	
	Manufacturing Statistics.....	1.7		Employment Program.....	5.10
	Exports.....	1.8	6	Canadian Jobs Strategy.....	5.11
	Export Destinations.....	1.9		Power and	
	Imports.....	1.10		Telecommunications	
	Import Origins.....	1.10		Nova Scotia Power	
2	Incentives Overview			Corporation.....	6.1
	Provincial Government.....	2.1		Power Rates.....	6.2
	Federal Government.....	2.4		Power System Map.....	6.4
	Transportation.....	2.5	7	Telecommunications.....	6.5
	Manpower Training.....	2.6		Transportation Systems	
	Research.....	2.7		Rail, Road, Ocean, and	
	Tax.....	2.8		Air Transport.....	7.1
3	Incentives and Financing			Transportation Incentive:	
	Small Business Development			Atlantic Region Freight	
	Corporation.....	3.1		Assistance Program.....	7.2
	Nova Scotia Business			Highways Map.....	7.4
	Capital Corporation.....	3.2		Port of Halifax.....	7.5
	Technology Transfer			Strait of Canso Port.....	7.6
	and Industrial Innovation.....	3.3		Sydney Harbour Ports.....	7.7
	Business Futures Program.....	3.5		Container Ship Services.....	7.8
	Technology 2000.....	3.6		Major Air Services.....	7.10
	World Market Fund.....	3.7	8	International Markets Map.....	7.11
	Atlantic Canada			Industrial Parks	
	Opportunities Agency.....	3.8		Industrial Parks and Malls.....	8.1
	Industry, Science			Industrial Parks Map.....	8.2
	and Technology Canada.....	3.10	9	Research and Development	
	Proposal Information Outline.....	3.11		and Education Facilities	
	Example Incentive Sheets.....	3.12		Research and Development	
4	Taxation			Facilities.....	9.1
	Corporate Income Tax Rates.....	4.2		Education Facilities.....	9.10
	Sales, Customs and			Universities and Colleges.....	9.11
	Excise Taxes.....	4.6		Technological Institutions.....	9.11
	Municipal Tax Rates.....	4.7		Community Colleges.....	9.12
5	Labour Force Information			Vocational Training.....	9.16
	Labour Force Characteristics.....	5.2	10	Management Training.....	9.17
	Wage Rates.....	5.3		Lifestyle in Nova Scotia	
	Workstoppages.....	5.6		Lifestyle.....	10.1
				Climate.....	10.3

1 Nova Scotia Overview

Nova Scotia.....	1.1
Historical Sketch.....	1.2
Map.....	1.3
Selected Economic Indicators.....	1.4
Population of Cities and Towns...	1.5
Population by County.....	1.6
Manufacturing Statistics.....	1.7
Exports.....	1.8
Export Destinations.....	1.9
Imports.....	1.10
Import Origins.....	1.10

Nova Scotia

- Lying 50 miles (80 km) east of Maine, across a beautiful arm of the Atlantic called the "Bay of Fundy"...
- 880,000 people with a Scots, English, German, Irish, New England, French-Canadian "work-ethic" heritage...
- Strong trading ties to the U.S. which go back over 200 years...
- A land of 10,000 lakes... and 4,600 miles (7400) of ocean shoreline, some rocky, some sandy, some gentle, some rugged...
- A lively history of seafaring, industrial innovation and entrepreneurs...
- Halifax, its capital city, the financial, business and research hub of Canada's four easternmost provinces, the "Atlantic Provinces"...
- World-class ports lying astride the major ocean routes between New York, Boston and Europe...
- A land high on education, with more universities for its size than any other part of Canada...
- Well-developed trade linkages eastward to Europe, westward to the rest of Canada, and southeast to New England and the rest of America...
- A very good place to live, to do business, and to invest!

Historical Sketch

East of Maine, across a long arm of the Atlantic called the Bay of Fundy, lies Nova Scotia. Nearly surrounded by the sea, boasting hundreds of inlets and islands, it has more than 4,500 miles (7,500 kilometres) of shoreline to support its claim to be "Canada's Ocean Playground". So closely is Nova Scotia associated with the sea that the other crown jewels in its geography are often overlooked: thousands of spruce-lined, freshwater lakes. Such a mix of fresh and salt water beauty is matched in few places in the world.

Three years before the English set up their first permanent colony in the New World at Jamestown, the French, under the great explorer Champlain, founded a colony in Nova Scotia at Port Royal. The year was 1607, and the land was called "Acadie". After this tiny start, history brought many newcomers to the land, and Nova Scotia developed a ship-building and sea-faring tradition which rivalled that of New England.

After the English began to colonize New England, the Scots also wanted to start colonies in the New World. So they began to settle north of New England in Acadia, which they called "Nova Scotia" — which means "New Scotland" in Latin. This Scottish heritage has been at the core of Nova Scotia's identity for centuries, and the Scottish flair for business has driven the province's long tradition of trade, commerce and industry.

When 1776 arrived, there were fifteen English-controlled colonies in North America, and the two northerly ones, Canada and Nova Scotia, declined to join with the revolutionary colonists to the south. The reasons make an interesting story too long to tell here, but when the dust had settled, Nova Scotians, the vast majority of whom had relatives in New England and New York, were quick to build trading links with the United States. This tradition remains as strong today as it was 200 years ago, and no province of Canada has a more active history of trade with the U.S. than Nova Scotia.

Geography has helped Nova Scotians from the beginning. Fishing grounds rich in lobsters, scallops and fish surround the province. The Annapolis Valley is one of the great orchard regions on the east coast. Nova Scotia's northern island, Cape Breton, saw early industrial development based on its coal (which is still being developed today), and later tourist development based on a rugged natural beauty that rivals the Smokey Mountains of Tennessee. And being nearly astride the main shipping lanes between Europe and Boston and New York, Nova Scotia's sea-faring and trading heritage was quite natural.

Now Nova Scotia confidently faces the future as one of Canada's four "Atlantic Provinces". Its capital city, the historical English fort-city of Halifax, is the financial, commercial and transportation hub of that region. Its commercial and trade linkages move eastward to Europe, westward to the rest of Canada, and southeast to New England and the rest of America.

Nova Scotia by the sea — a very good place to live, to do business, and to invest.

Geographic Location. International location (top); eastern North America location (bottom)

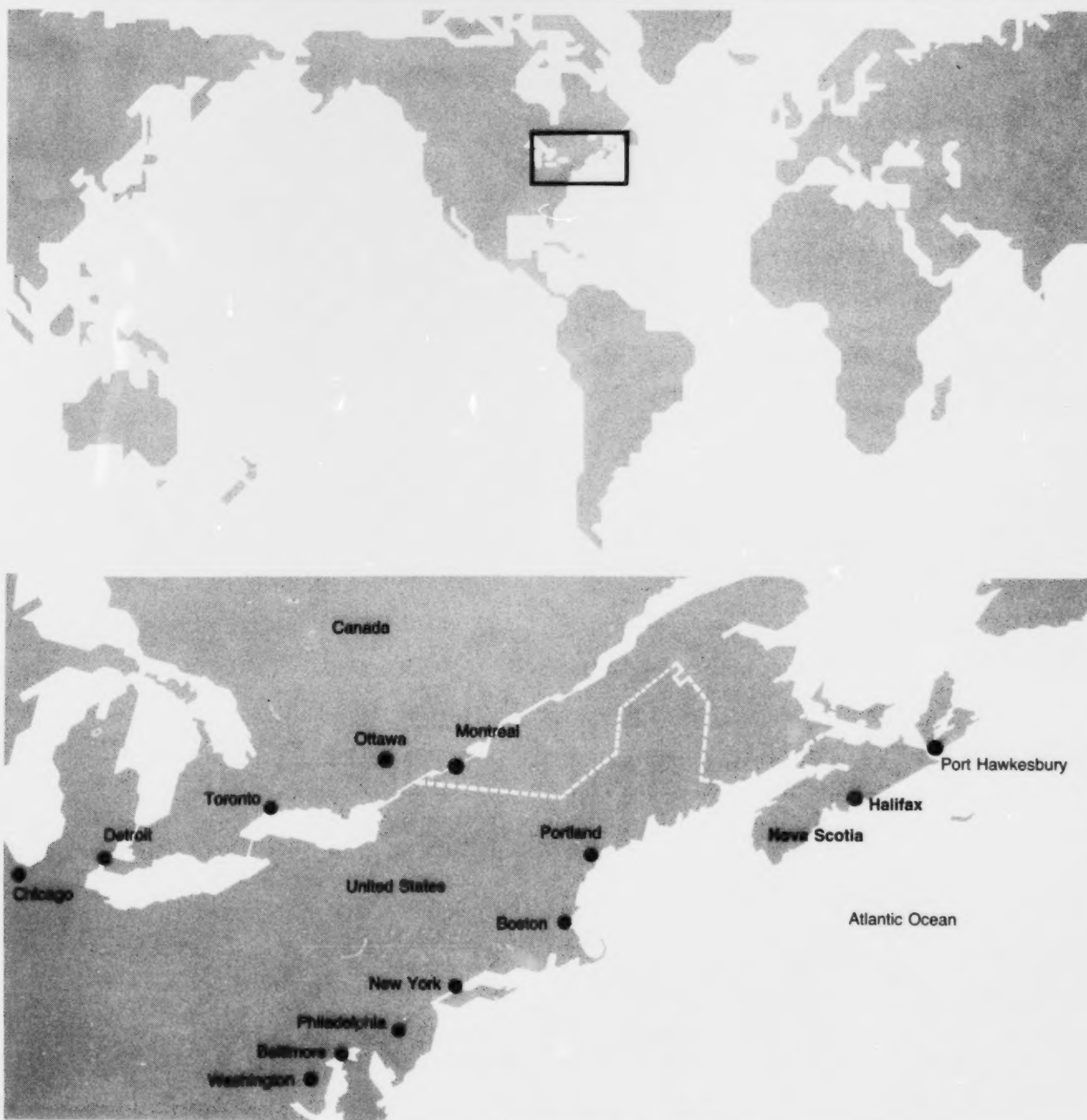


Table 1

Selected Economic Indicators, Nova Scotia, 1988*

Population (June 1)	883,900
GDP at market prices ^{ec}	\$14,300,000,000
GDP per capita ^e	\$16,175
Personal income per capita ^e	\$15,570
Consumer Price Index (1981 = 100)	141.4
Labour force	408,000
Unemployment rate	10.2
Retail trade ^P	\$5,605,766,000
Value of manufacturing shipments ^P	\$4,386,000,000
Total capital and repair investment ^P	\$4,111,100,000
Total value of construction ^P	\$2,354,100,000
Housing starts	5,478
Farm cash receipts	\$298,022,000
Value of mining ^P	\$461,063,000
Value of fish landings (1987) ^P	\$510,600,000
Total forest production (m ³)(1987) ^e	3,775,000
Tourist expenditure (1987) ^e	\$240,000,000
Net power generation (megawatt hours) ^P	8,891,849

Source: Statistics Canada (various publications), The Conference Board of Canada, Nova Scotia Department of Lands and Forests, and Nova Scotia Department of Tourism and Culture.

* Except where indicated.

^e Estimate.

ⁱ Intention.

^P Preliminary.

^c Note that all dollar values in this book are in Canadian funds.
On December 15, 1988, the exchange rate was: \$1.00 U.S. = \$1.20 Canadian.

Table 2

Population of Selected Cities and Towns of Nova Scotia, 1986

Amherst.....	9,671	Sydney Area.....	119,470
Bridgewater.....	6,617	Sydney	27,754
New Glasgow.....	10,022	Glace Bay	20,467
Stellarton.....	5,259	New Waterford	8,326
Truro.....	12,124	Sydney Mines	8,063
Yarmouth.....	7,617	North Sydney	7,472
Kentville Area.....	31,025	Other	47,388
Kentville	5,208	Halifax Metro Area.....	295,990
Wolfville	3,277	Halifax	113,577
Other	22,540	Dartmouth	65,243
		Bedford	8,010
		Other	109,160

Source: Statistics Canada, 1986 Census

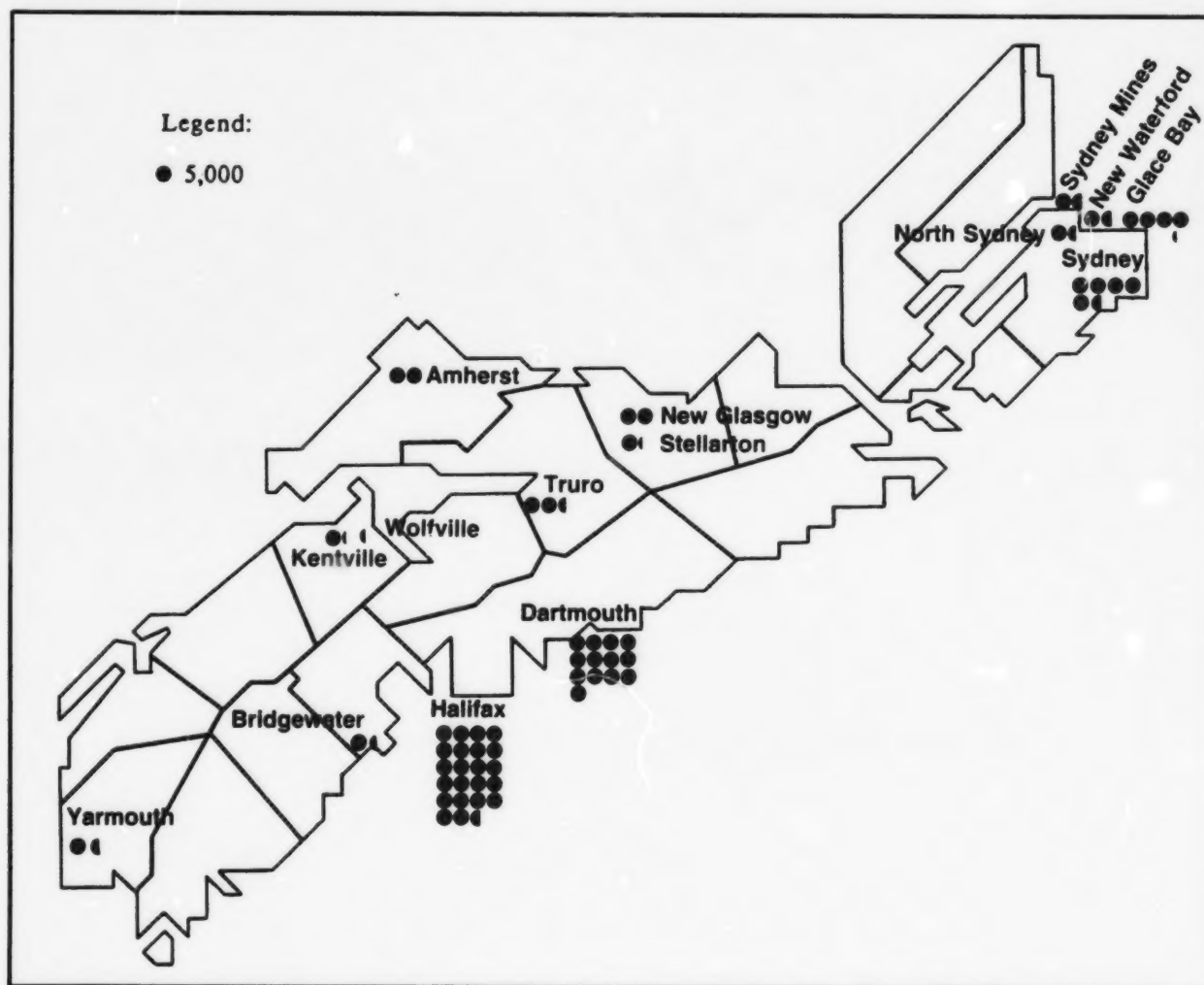


Table 3

Population By County, Nova Scotia, 1986

County	Population	% of N.S.	County	Population	% of N.S.
Annapolis	23,589	2.70	Kings	53,275	6.10
Antigonish	18,776	2.15	Lunenburg	46,483	5.32
Cape Breton	123,625	14.16	Pictou	49,772	5.70
Colchester	45,093	5.16	Queens	13,148	1.51
Cumberland	34,819	3.99	Richmond	11,841	1.36
Digby	21,852	2.50	Shelburne	17,516	2.01
Guysborough	12,721	1.46	Victoria	8,704	1.00
Halifax	306,418	35.09	Yarmouth	27,073	3.10
Hants	36,548	4.19	Total	873,199	100.00
Inverness	21,946	2.51			

Source: Statistics Canada, 1986 Census

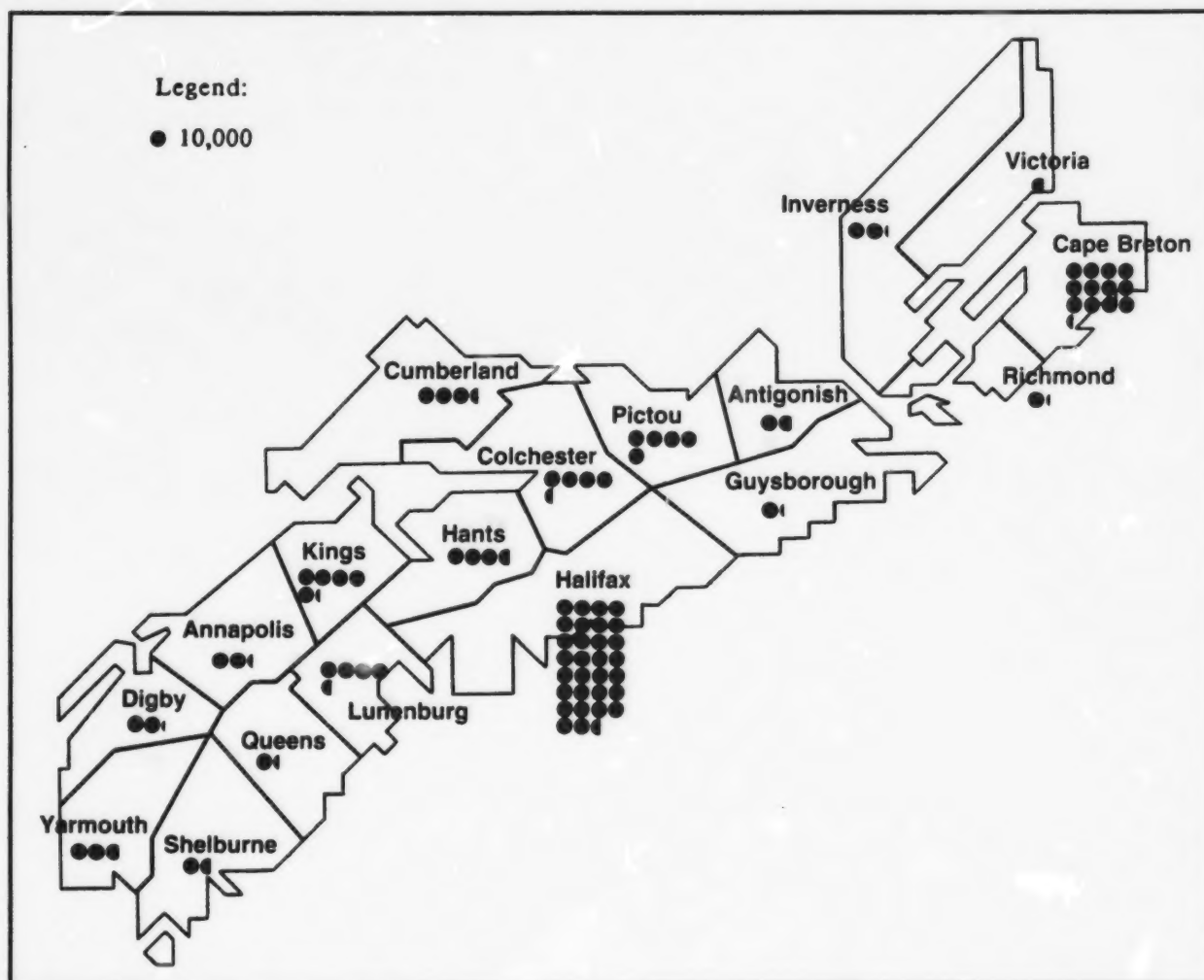


Table 4

Manufacturing Statistics by Industry Group, Nova Scotia

<u>Industry Group</u>	<u>Number of Establishments</u> (1985)	<u>Value of Shipments (000s)</u> (1987)	<u>Percent Value of Shipments</u> (1987)
Food products	175	\$1,139,194	24.6
Wood (lumber, furniture etc.)	160	\$191,354	4.1
Paper and allied	14	\$591,415	12.8
Fabricated metal products	90	\$118,309	2.6
Transportation equipment	71	\$307,093	6.7
Miscellaneous and other manufacturing ¹	310	\$2,269,452	49.2
Total	820	\$4,616,817	100.0

Source: Statistics Canada, 31-203

¹Includes tires, oil refining, electric and electronic products, plastics, chemical products, textiles, etc. Due to the confidentiality of the individual firms' data, disaggregated information cannot be provided.

Table 5

Exports, Nova Scotia, 1987

<u>Commodity</u>	<u>Dollars (000s)</u>	<u>Percent of Total</u>
A. Fish and fish products.....	720,158	35.04
B. Pulp and paper.....	474,564	23.09
C. Transportation equipment (incl. tires).....	437,796	21.30
D. Nonmetallic minerals (incl. coal, gypsum).....	82,098	3.99
E. Petroleum products and chemicals.....	68,625	3.34
F. Rails and railway track material.....	57,795	2.81
G. Live animals and food products (except fish).....	47,291	2.30
H. Metallic ores and scrap.....	32,726	1.59
I. Other industrial precision equipment.....	21,498	1.05
J. Commercial telecommunication equipment.....	20,464	1.00
K. Christmas trees.....	10,224	0.50
L. Other.....	82,235	4.00
Total.....	2,055,474	100.00

Source: Department of Industry, Trade, and Technology; estimates from Statistics Canada Laden Tabulations

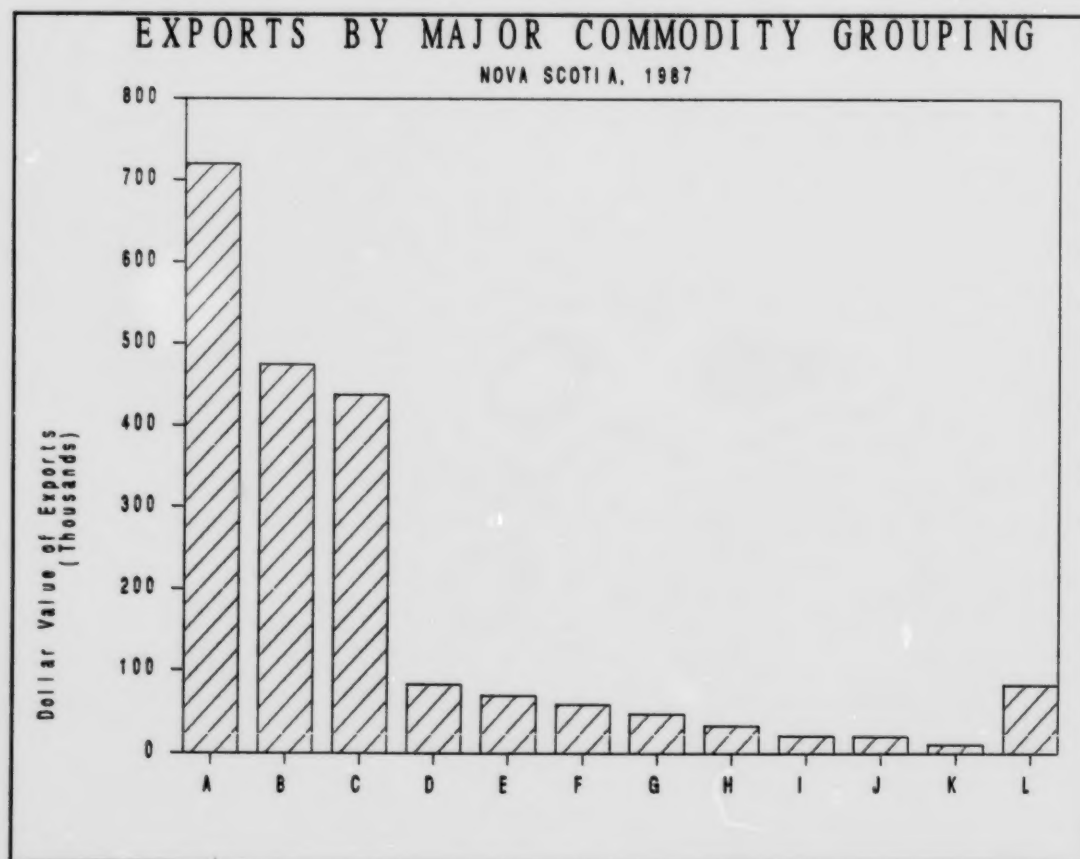


Table 6

Export Destinations, Nova Scotia, 1987

<u>Destination</u>	<u>Dollars</u> <u>(000s)</u>	<u>Percent</u> <u>of Total</u>
United States	\$1,506,237	73.28
New England.....	\$562,150	
Mid Atlantic.....	\$307,426	
Southeast.....	\$477,502	
Other United States.....	\$159,159	
European Economic Community*	\$220,590	10.83
European Free Trade Association**	\$42,515	2.07
Latin American Free Trade Association***	\$70,486	3.43
West Indies and Bermuda.....	\$37,435	1.82
All Other.....	\$176,211	8.57
Total.....	\$2,055,474	100.00

Source: IT&T estimates from Statistics Canada Laden Tabulation

* European Economic Community includes the United Kingdom, Belgium-Luxembourg, Denmark, France, Ireland, Italy, Netherlands, West Germany, Portugal, Spain, and Greece.

** European Free Trade Association includes Austria, Finland, Iceland, Norway, Sweden, and Switzerland.

*** Latin American Free Trade Association includes Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, and Mexico.

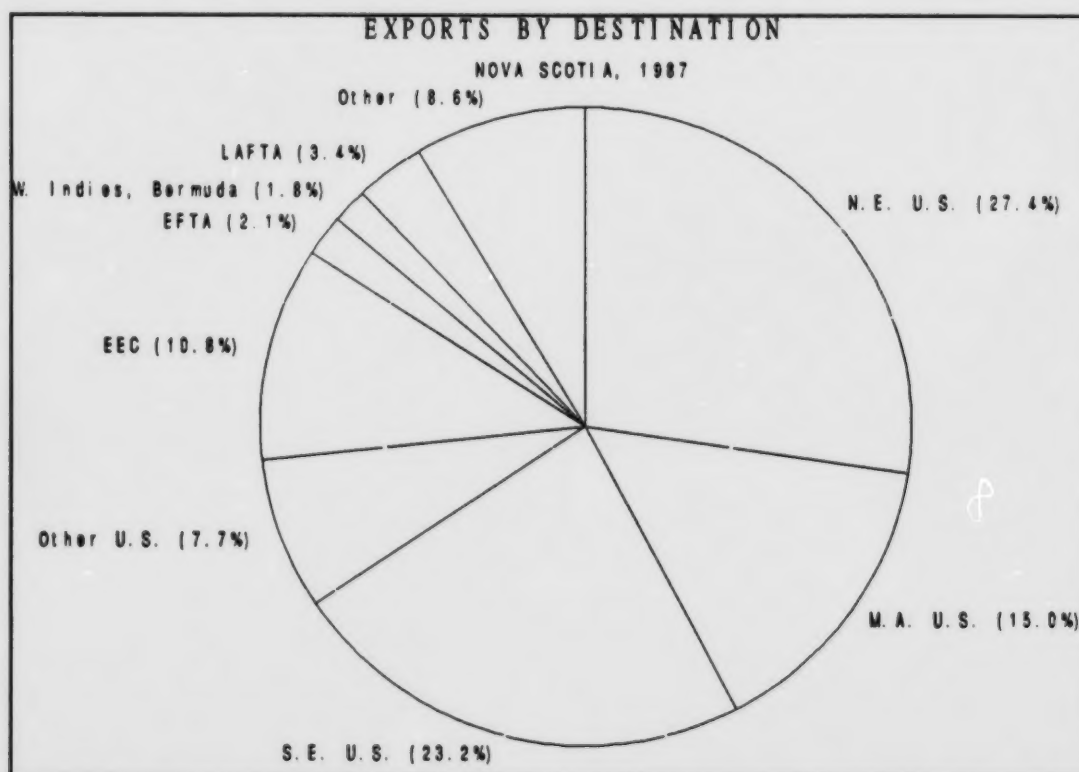


Table 7

Canadian Imports by Major Commodity Groupings,
Cleared Through Nova Scotia, 1987

<u>Commodity</u>	<u>Dollars</u> <u>(000s)</u>
End products, inedible.....	1,456,454
Crude materials, inedible.....	715,644
Fabricated materials, inedible.....	207,686
Food, feed, beverages, and tobacco.....	128,385
Special transactions, trade.....	27,252
Live animals.....	213
Other.....	14,666
Total.....	2,550,300

Source: Statistics Canada, 65-001; Summary of External Trade,
December 1987

Table 8

Canadian Imports by Origin,
Cleared Through Nova Scotia, 1987

	<u>Dollars</u> <u>(000s)</u>
United States.....	306,359
European Economic Community*.....	1,335,512
European Free Trade Association**.....	337,763
Latin American Free Trade Association***.....	277,893
West Indies and Bermuda.....	23,590
Other.....	269,183
Total.....	2,550,300

Source: Statistics Canada 65-006; Imports by Country, December 1987

* Includes United Kingdom, Belgium-Luxembourg, Denmark, France,
Ireland, Italy, Netherlands, West Germany, Portugal, Spain, and Greece.

** Includes Austria, Finland, Iceland, Norway, Sweden, and Switzerland.

*** Includes Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador,
Paraguay, Peru, Uruguay, Venezuela, and Mexico.

2 Incentives Overview

General Incentives

Provincial Government..... 2.1

Federal Government..... 2.4

Special Incentives

Transportation..... 2.5

Manpower Training..... 2.6

Research..... 2.7

Tax..... 2.8

General Incentives

Provincial Government

The Government of Nova Scotia, both directly and through its financial agencies, provides a range of programs and financing to help business people establish new ventures and expand existing businesses in the province.

The following highlights several of those programs. They are explained in greater detail in Section 3.

Small Business Development Corporation (SBDC)

The SBDC is a provincial crown corporation which makes financing available to small businesses in Nova Scotia wishing to start up, expand, or modernize. (In this context, a "small business" in Nova Scotia is a business with less than \$3,000,000 annual sales and less than 50 employees [100 in manufacturing].)

Nova Scotia Business Capital Corporation (NSBCC)

This crown corporation provides financial assistance to larger firms or to firms requiring more than \$250,000 who are interested in promoting business growth and increased employment opportunities in the province.

Technology Transfer and Industrial Innovation: A Canada-Nova Scotia Subsidiary Agreement

This is a shared federal/provincial program designed to help Nova Scotia companies make technological improvements needed to compete successfully in world markets.

It includes incentives for acquiring advanced technological equipment and skills, and for converting innovative ideas into technology-based products and services.

The Agreement also supports advanced technological research.

Programs of the Nova Scotia Department of Industry, Trade and Technology

Business Futures Program (BFP)

The Business Futures Program helps Nova Scotia companies to identify market and business opportunities related to out of province trade, and to capitalize on those opportunities.

The Business Futures Program will provide funds for:

- Trade Planning
- Trade Promotion
- Trade Expansion
- Trade Opportunity
- Product Development
- Industrial Adjustment

Technology 2000

This program (still in the planning stage) will be designed to increase investment in technology, and to foster research collaboration among industries, universities and research institutions in Nova Scotia.

Technology 2000 will provide funds for:

- Centres of Excellence
- Seed Capital Fund
- Technology Development
- Research Support
- Technology Management Centre
- Technology Investment Opportunities

World Market Fund

The World Market Fund is an incentive program for Nova Scotia firms to introduce new products on international markets and to develop new products for export.

The World Market Fund will defray some costs of:

- Product adaptation
- Sales office facilities
- Specialized distribution services
- Market strategies
- Management strategies
- Management training
- Staff training and personnel development

Programs of the Nova Scotia Department of Small Business Development

This Department fosters small business* development in Nova Scotia through a variety of mechanisms:

- Rural Industry Program
- Consulting Assistance Program
- Special Assistance Program
- Small Business Advisory Services
- Trade Expansion Program
- Women Entrepreneurs Program
- Black Entrepreneurs Program
- Disabled Entrepreneurs Program
- Youth Entrepreneurial Skills Program

There are also ten Small Business Centres located in towns throughout the province, where staff administer departmental and government programs, and provide hands-on help to small businesses on an "as-needed" basis.

For further information on small business incentives and support in Nova Scotia, contact:

Nova Scotia Department of Small Business Development
Suite 700
Joseph Howe Building
1690 Hollis Street
Halifax, Nova Scotia, Canada
B3J 3J9
(902) 424-6629

* In this context, a "small business" in Nova Scotia is a business with less than \$3,000,000 annual sales and less than 50 employees (100 in manufacturing).

Federal Government

The Government of Canada provides a range of programs to foster economic development across the nation, and several special regional programs to support development in the Atlantic Provinces and Nova Scotia.

The following highlights the most important of those programs. They are explained in greater detail in Section 3.

Atlantic Canada Opportunities Agency (ACOA)

The Atlantic Canada Opportunities Agency is a federal government development agency with a mandate to promote the long-term economic growth of Atlantic Canada, including Nova Scotia.

ACOA offers financial assistance through loan insurance, interest buy-downs, grants (up to 50%) and repayable contributions (i.e. interest-free loans).

The ACOA Action Plan offers help in five main areas of business activity:

- New facility establishment
- Expansion/modernization/new product development
- Innovation assistance
- Studies
- Non-commercial business support

Businesses in the following sectors are eligible for ACOA assistance:

- Aquaculture
- Selected Business Service Industries
- Certain Agriculture Industries
- Commercial Research and Development Facilities
- Freight Forwarding Industries
- Logging Industries
- Manufacturing and Processing Industries
- Mining and Related Services
- Repair and Maintenance Services
- Storage and Warehousing Industries
- Tourism

Enterprise Cape Breton (ECB)

The northern part of Nova Scotia, Cape Breton, has been designated for special incentives to help develop a more diversified economy. Enterprise Cape Breton, which is an agency within ACOA, has been set up to administer those incentives.

Cape Breton Topping-Up Assistance (TUA)

A major incentive available through Enterprise Cape Breton is the Cape Breton Topping-Up Assistance, which offers grants of up to 60 percent of total eligible capital investment for new or expanding business in Cape Breton and the Strait of Canso area.

SPECIAL INCENTIVES



Transportation Incentives

Atlantic Region Freight Assistance Program (ARFA)

The Atlantic Region Freight Assistance Program has been established by the Government of Canada to lower transportation rates for manufacturers and producers in the four Atlantic Provinces, including Nova Scotia.

This transportation assistance program falls into three distinct parts covering:

- Shipments within the four Atlantic Provinces
- Westbound shipments (within Canada) of all commodities
- Westbound shipments (within Canada) of selected commodities.

Additional details are provided in Section 7.

Manpower Training Incentives

Vocational Training Programs

The Government of Nova Scotia operates a broad range of apprenticeship programs, as well as trade training and vocational institutes, which offer a wide variety of training opportunities to all sectors of the economy.

In addition, when new and/or unique skills are required, the Nova Scotia Department of Advanced Education and Job Training will organize special technical training arrangements to meet the client's requirements.

Financial assistance for training is available through the Nova Scotia Training and Employment Program (NSTEP) and the Canadian Jobs Strategy.

Nova Scotia Training and Employment Program (NSTEP)

This program of the Nova Scotia Department of Advanced Education and Job Training is designed to create additional employment opportunities through structured training on the job.

Additional details about manpower programs are provided in Section 5.

Canadian Jobs Strategy

The Canadian Jobs Strategy is an initiative of the federal Department of Employment and Immigration, and involves a new group of labour market programs to help Canadians meet the challenge posed by technological change, shifting world markets, new skill requirements, and the need to increase productivity.

Programs that form the Canadian Jobs Strategy include:

- Job Development Program
- Skill Shortages Program
- Unemployment Insurance Job Creation
- Job Entry Program

Additional details are provided in Section 5.

Research Incentives

Industrial Energy Research and Development Program (IERD)

This program promotes the development of products, processes, or systems that will increase the efficiency of energy use by industry, and encourages the use of technologies oriented toward energy savings.

Canadian companies, individuals, trade and research organizations, as well as consulting firms, are eligible for assistance of up to 50 percent of the eligible costs of a project.

Industrial Research Assistance Program (IRAP)

This program of Canada's National Research Council helps Canadian companies in their efforts to expand through new product development.

It encourages applied research in Canadian industry, with the objective of increasing the calibre and scope of industrial R&D in Canada in a business environment.

The five elements of the program are listed below.

1. IRAP-C: Field Advisory Service.
2. IRAP-H: Contributions to Firms Employing Undergraduates.
3. IRAP-L: Contributions to Laboratory Investigations.
4. IRAP-M: Contributions to Small Projects.
5. IRAP (PILP): Major Collaborative Projects. For example: a Biotechnology Development Program has been established within the IRAP to link the needs of the developing biotechnology industry in Canada and the skills of researchers in universities and provincial research organizations. Several other projects exist, and new projects can be organized.

Another aspect of this program is that it can assist employers, through salary subsidies, to hire unemployed technicians, engineers and scientists to work on new research projects.

Tax Incentives

Small Business Deduction

This deduction reduces the federal corporate income tax rate on eligible amounts of active business income earned in Canada from 28 percent to 12 percent. The amount of active business income eligible for the Small Business Rate in a year is \$200,000.

Special Rate for Manufacturing and Processing Profits

A special rate of corporate income tax on manufacturing and processing activities reduces the federal general rate on corporate profits from 28 percent to 26 percent. Provincial corporate tax rates ranging from 10 percent to 15 percent are levied in addition to the applicable federal rate.

Nova Scotia New Business

As an incentive to formation of new business ventures, the provincial rate of tax is reduced to 0% for the first two fiscal periods on the first \$200,000 of annual taxable income.

Capital Cost Allowance

The Capital Cost Allowance allows taxpayers to charge up to a 25 percent declining balance on manufacturing machinery and equipment, thus allowing for a significant "writeoff" of such assets in initial years of operation.

Investment Tax Credits (ITC)

In Atlantic Canada, including Nova Scotia, an investment tax credit of 15 percent of capital costs (less government assistance) is available for many projects for new manufacturing and processing equipment. This credit directly reduces federal income tax otherwise payable.

Tax credits may be carried back three years and forward for ten.

Additional details are available in Section 4.

The Certified Property Investment Tax Credit (CP-ITC)

The northern parts of Nova Scotia, Cape Breton Island and Guysborough County, have been designated as a special development area and are therefore eligible for the Certified Property Investment Tax Credit. Investments in certain defined facilities (new plants and equipment) used for manufacturing or processing are eligible for this special credit.

In these areas, the Investment Tax Credit (ITC) rate is 30 percent of the cost of buildings and equipment (property) required for the project.

The ITC is used to offset federal taxes otherwise payable. If none are payable and the applicant is an individual or a small Canadian Controlled Private Corporation, 40 percent of the ITC is refundable in cash.

Any part of the ITC not used in the current year or refunded may be carried forward for ten years and backward for three.

Special R&D Credits (R&D-ITC)

The Canadian federal Research & Development Investment Tax Credit is 20 percent.

In Nova Scotia, this R&D tax credit is 30 percent of the current and capital scientific research expenditures incurred in a taxation year. (Businesses eligible for the Small Business Rate are eligible for a 35 percent R&D tax credit.)

Nova Scotia R&D Income and Sales Tax Incentives

A provincial Income Tax Credit is equal to 10 percent of expenditures eligible for credit under the Federal Income Tax Act.

Nova Scotia also provides a 100 percent refund of the provincial sales tax paid on machinery and equipment used in research and development.

Sales, Customs and Excise Taxes

There are circumstances where certain kinds of relief relating to custom duties and sales and excise taxes are made available.

Additional details are available in Section 4.

3 Financing and Incentives

Small Business Development Corporation.....	3.1
Nova Scotia Business Capital Corporation.....	3.2
Technology Transfer and Industrial Innovation.....	3.3
Business Futures Program.....	3.5
Technology 2000.....	3.6
World Market Fund.....	3.7
Atlantic Canada Opportunities Agency.....	3.8
Industry, Science and Technology Canada.....	3.10
Proposal Information Outline.....	3.11
Example Incentive Sheets.....	3.12

Small Business Development Corporation (SBDC)

The Small Business Development Corporation makes financing available to small enterprises wishing to start up, expand, or modernize. The corporation is part of the Government of Nova Scotia's strategy to enhance the economy of the province.

Eligibility

Any proprietorship, partnership, cooperative, or corporation with:

- Less than \$3 million annual sales.
- Less than 50 employees (100 in manufacturing).
- Requiring more than \$5,000 but less than \$250,000.

Most Nova Scotia small businesses are eligible, but preference will be given to businesses which create new or additional jobs.

The following may not apply:

- Nonprofit organizations.
- Professional and related services.
- Residential and rental accommodation.
- Financial and insurance agencies.
- Real estate and land development.
- Small business covered by other provincial lending agencies (i.e., Fishermen's Loan Board, Farm Loan Board, Timber Loan Board).

The interest rate is fixed for the life of the loan, and repayment terms are flexible. Term loans secured by fixed assets and loan guarantees (under exceptional circumstances) may be used:

- To finance land, buildings, equipment, and other fixed assets.
- To replenish operating capital depleted by capital expenditures over the past two years.
- At the discretion of the corporation, to augment financing needed by industries considered of special importance to Nova Scotia, such as those involved in research and development, high technology, and offshore industry opportunities.

Nova Scotia Business Capital Corporation (NSBCC)

The Nova Scotia Business Capital Corporation (NSBCC) has a mandate to provide financial assistance and guidance to those interested in promoting business growth and increased employment opportunities in the province, including tourism or tourism-related business.

Specifically, the NSBCC:

- Deals with larger firms (above \$3 million annual sales, or above 50 employees [100 in manufacturing]).
- Offers loan financing.
- Provides loan guarantees.
- Owns and operates Provincial Industrial Parks (provides rental assistance, industrial incubators, etc.).
- Enables private Nova Scotia venture capital corporations to secure matching funds in the form of ten-year interest-free loans.

Technology Transfer and Industrial Innovation: A Canada-Nova Scotia Subsidiary Agreement

Companies in Nova Scotia, as everywhere else, are now competing in an international marketplace. New technologies such as microelectronics, computer-aided design and manufacturing, construction materials, composite materials, biotechnology, etc., offer tremendous opportunities to improve product design, production processes, services, productivity, and, in turn, competitiveness.

The Technology Transfer and Industrial Innovation Subsidiary Agreement is designed to help Nova Scotia companies compete successfully in world markets. It includes incentive programs designed to help Nova Scotia companies acquire advanced technological equipment and skills, and to convert innovative ideas into technology-based products and services. The agreement also supports advanced technological research, development, teaching, and demonstration in provincial research institutions.

What is Technology Transfer?

Technology transfer is the process through which the equipment, skills, knowledge, and understanding required for a particular task are passed on from one individual or organization or country to another. For example, technology transfer results when a firm develops a product using research done in a university laboratory or when a Nova Scotia company first applies a process developed elsewhere.

Industrial innovation, on the other hand, is the application of in-house skills for creative problem solving. Innovation, however, can include utilizing existing technologies in a new way to develop a unique product, process, or service.

Objectives

The Technology Transfer and Industrial Innovation Subsidiary Agreement provides funding to give Nova Scotia businesses the opportunity to take advantage of new technological options. In doing so, it will encourage "take up" of new technologies within Nova Scotia, increase business awareness of opportunities offered by advanced technology, develop high technology support services, and provide incentives for the development of technology-based companies.

Assistance Available

Various incentive programs and support services are available under the Technology Transfer and Industrial Innovation Subsidiary Agreement. Key programs and services include the following.

The **Technology Advancement Program** assists Nova Scotia-based businesses to improve their technological capabilities through acquisition of modern capital equipment and services. To be eligible, projects must lead to a significant technological enhancement of existing capabilities. Up to 50 percent of capital costs and 75 percent of noncapital costs of the project can be funded under this program.

The Technology Collaboration Program provides incentives and services to help businesses use technological expertise from research institutions located in Nova Scotia to improve efficiency and productivity and to develop technology-based products. This program includes several sub-programs which provide funding for:

- Joint business-research sector projects involving technology improvement and development of related business operations.
- Personnel exchange between research institutions and the private sector.
- Hiring of students and graduates in technology, science, and relevant business fields.
- A Technology Transfer Office which will increase awareness of possibilities for interaction between institutional research and private sector interests and to provide services and coordinate activities which facilitate this interaction.

In addition to these programs, the Technology Transfer and Industrial Innovation Subsidiary Agreement provides funding for projects to enhance technology-related programs and capabilities in research and educational institutions in the province. Funding for the establishment of private sector Technology Business Centres (TBCs), which offer start-up counselling, basic operating space, and common services to new technology-related businesses, is also provided.

Who Can Receive Assistance?

New or existing Nova Scotia businesses engaged in manufacturing, processing, and technological services industries who stand to benefit from the acquisition of advanced technological skills or equipment are eligible.

The Goal: A Technological Future for Nova Scotia

The long-term objectives of the Technology Transfer and Industrial Innovation Subsidiary Agreement are as follows.

- To diversify the Nova Scotia economy by broadening the base of technology-related firms.
- To foster productivity improvements in existing companies and to increase potential exports from Nova Scotia.
- To establish Nova Scotia as a centre for scientific and engineering excellence in order to encourage capital investment in the province.

Information

More information about the Technology Transfer and Industrial Innovation Subsidiary Agreement, its programs and funding can be obtained from:

Nova Scotia Department of
Industry, Trade, and Technology
P.O. Box 519
Halifax, Nova Scotia B3J 2R7
(902) 424-6764

Business Futures Program (BFP)

The Business Futures Program is designed to be flexible and is intended to assist Nova Scotia companies to identify market and business opportunities related to international trade. The program will enable companies to capitalize on their opportunities by providing funds for projects that demonstrate a potential for increased marketing, trade and job creation. The BFP will provide assistance for:

Trade Planning - strategic planning related to marketing and promotion; purchasing marketing expertise; development of comprehensive databases and market intelligence surveys on market growth opportunities.

Trade Promotion - government initiated trade missions and shows.

Trade Expansion - participation in trade shows; carrying out trade identification projects; hosting incoming buyers; attending marketing education events.

Trade Opportunity - establishing and sustaining new markets outside of the Maritimes; exploring and/or implementing a counter-trade project.

Product Development - designing innovative new products, new packaging and new marketing literature.

Industrial Adjustment - strategic planning and trade development where, as a result, enhanced business or marketing opportunities will occur.

For more information regarding the Business Futures Program contact:

Nova Scotia Department of
Industry, Trade and Technology
P.O. Box 519
Halifax, Nova Scotia B3J 2R7
(902) 424-4242

Technology 2000

This is a new umbrella program designed to enhance the level of technology investment and collaborative research between research institutions and industry in the province, and to further advance technology development and technology transfer. Technology 2000 will provide funds for:

Centres of Excellence - a collaborative network of R&D expertise involving industry and institutions with researchers and facilities.

Seed Capital Fund - provision of seed capital (matched by private sector) to high-risk start-up companies.

Technology Development - to assist in research leading to development, practical application and/or commercialization of new improved products, services or methodologies, which come from recognized advances in technology.

Research Support - to assist universities, community colleges and research establishments by offering direct overhead costs relating to collaborative research with Nova Scotia industry.

Technology Management Centre - to focus on the business needs of high technology business and the use of high technology products and services in Nova Scotia.

Technology Investment Opportunities - funding for unique projects in world leading edge technologies.

For more information, contact:

Nova Scotia Department of
Industry, Trade and Technology
P.O. Box 519
Halifax, Nova Scotia B3J 2R7
(902) 424-6764

World Market Fund

The objective will be to develop and introduce new products to international markets. It will fund projects such as market promotional aids and product adaptation costs, sales office facilities and specialized distribution services, market strategies, management and staff training and development.

For more information, contact:

Trade Development Centre
Nova Scotia Department of
Industry, Trade and Technology
P.O. Box 519
Halifax, Nova Scotia B3J 2R7
(902) 424-4242

Atlantic Canada Opportunities Agency (ACOA)

Atlantic Canada Opportunities Agency is a federal government development agency with a mandate to promote the long-term economic growth of Atlantic Canada.

ACOA provides assistance to business through:

- *Loan Insurance.* New term loans of \$100,000 or more may qualify for 85 percent insurance for a maximum of 15 years.
- *Interest Buydowns.* Interest payable on new term loans of \$25,000 or more for new capital investments may be eligible for a buy-down of up to 6% a year for a period not exceeding seven years.
- *Contributions.* Funding is available to contribute part of the costs of business activities listed below. The contribution takes the form of a grant or a repayable interest-free loan.

The ACOA Action Plan offers assistance in five main areas of business activity.

1. *Business Support.* Noncommercial operations may receive a grant or contribution for providing specialized service to small- and medium-sized businesses.
2. *Studies.* Proponents of commercial operations eligible for capital contributions or innovation assistance are eligible to receive 75 percent of the cost to contract qualified consultants to develop marketing plans and/or market research, perform a feasibility study, investigate licensing opportunities, undertake a venture capital or technology transfer search.

In addition, the operation may be eligible to receive up to 50 percent of the cost of hiring qualified persons for one year to implement a marketing plan.

3. *Innovation Assistance.* A contribution of up to 60 percent of the cost of researching and developing a new product, process, or service that is scientifically feasible and is commercially viable. Other innovative ideas eligible for up to 60 percent assistance include the design of new mass-producible and marketable products and the adaptation of products or processes offering a significant improvement in pollution abatement technology.
4. *New Facility Establishment.* A contribution may be offered for up to 50 percent of the capital costs of establishing a new facility. Under certain circumstances, this can include purchasing the assets of an existing facility but mergers, acquisitions of a company, or refinancing current assets are not allowed.
5. *Expansion/Modernization/New Product Expansion.* A contribution may be offered of up to 30 percent of the capital costs of expanding or modernizing an existing facility, including the replacement of facilities on the same site, or their relocation in whole or in part. The contributions are available to defray up to 40 percent of the capital costs of improving a facility to allow new product introduction or expansion, meaning a product or service not previously manufactured or supplied within the last three years. Contributions will not be made for mergers, acquisitions, or refinancing.

Eligible sectors:

- Aquaculture
- Selected Business Service Industries
- Certain Agriculture Industries
- Commercial Research and Development Facilities
- Freight Forwarding Industries
- Logging Industries
- Manufacturing and Processing Industries
- Mining and Related Services
- Repair and Maintenance Services
- Storage and Warehousing Industries
- Tourism

For more information contact:

Atlantic Canada Opportunities Agency
Suite 3000, 1489 Hollis Street
Halifax, Nova Scotia B3J 3M5
(902) 426-8361

or

Nova Scotia Department of
Industry, Trade and Technology
Industrial Promotion Branch
1800 Argyle St.
Halifax, Nova Scotia B37 2R7
(902) 424-5320

Industry, Science and Technology Canada

The Federal Department of Industry, Science and Technology (ISTC) focuses on the international competitiveness of Canadian industry, especially on measures in support of technology development, enhanced access to international and domestic markets, adequate capital investment, and judicious use of strategic intelligence.

ISTC offers a mix of services and programs in support of its industrial and technological mandate, and the Nova Scotia office is responsible for delivery of most of these services and programs to clients in Nova Scotia, including companies considering investment in Nova Scotia.

ISTC, with regard to new plant establishment and major expansion programs, is responsible for advising the government on projects of over \$20 million, including assessment of an appropriate level of financial assistance.

ISTC and the Federal Department of External Affairs (DEA) have cooperated to establish, in the ISTC offices in each province, an International Trade Centre. Increased emphasis has been placed on trade promotion, trade and marketing information services, and, in particular, on market opportunities in the United States as a result of the Canada/United States Free Trade Agreement.

For more information contact:

Industry, Science and Technology Canada
P.O. Box 940
Station M,
Halifax, Nova Scotia
B3J 2V9
(902) 426-3458

Proposal Information Outline

The following is an outline of information required in proposals and/or applications for different incentives and/or financing.

1. Company/Proponents
 - Outline of company's history.
 - Existing plants.
 - Directors and share distribution.
 - Listings of bankers, solicitors, and auditors.
 - Resumes of principals and key management personnel (parent company and in Nova Scotia).
2. Products (Existing and/or Proposed)
 - Sales history (if possible, 3 years sales figures, information regarding regional and seasonal characteristics of sales is desirable).
 - Description (product brochures).
 - Patents (pending and issued).
 - Competitive advantages (e.g., design, service, modification, technology).
 - Research and development activity (description).
3. Market
 - Size, share, location (existing and projected).
 - List of principal competitors.
 - Potential/actual competitor's expected reaction.
4. Marketing Plan (First 3 Years)
 - Sales estimates.
 - Verification of sales estimates (e.g., letters of intent from potential customers and/or justification of estimates).
 - Marketing organization (management, experience).
 - Advertising and sales promotion.
 - Buyers, distributors, end users.
5. Manufacturing
 - Raw materials (sources, volumes, advantage).
 - Manufacturing processes and technologies.
- Production layout.
- Quality control.
- Plant (location, site requirements).
- Buildings (plans, specifications, construction estimates, or quotes).
- Equipment (new and existing; cost estimates or quotes).
- Employment (first 3-year projection by numbers, skill, wage, and salary rate).
6. Financial
 - 3-year (preferably) audited financial statements (including affiliates if a company is in existence or if shareholders own one or more other companies).
 - Capital requirements of project (estimate of land, building, equipment, operating capital, and start-up costs).
 - Planned/proposed sources of financing of capital requirements (provide firm commitments wherever available, as well as own equity investment commitment).
 - Financial projections: (a) pro forma balance sheets and income statements for the first 3 years; (b) cash flow (monthly for year 1 and yearly for years 2 and 3); and (c) return on equity/return on investment.
7. Other information should also be included if appropriate, such as:
 - Appraisal reports or quotations (equipment and/or building).
 - Franchise agreements.
 - Grant approvals or applications (e.g., ACOA).
 - Lease agreements.
 - Feasibility studies.
 - Timing of project (startup).
 - Present or threatened litigation affecting the company or major principals.

EXAMPLE OF INCENTIVES AVAILABLE IN NOVA SCOTIA (February 1, 1989)

ILLUSTRATIVE FACT SHEET

Assumptions:

New plant, employment 100-150 people	
Land (5 acres a maximum of \$50,000/acre)	\$ 250,000
Standard industrial building of 50,000 sq. ft. (4600 m ²) at \$50/sq. ft. (\$543.48/m ²)	2,500,000
New machinery and equipment value	<u>4,000,000</u>
TOTAL	\$6,750,000

Incentives Available:

Requirement: Min. 20% of the total project cost must be equity (\$1,350,000 in this example)

OPTION 1

Plant located in mainland Nova Scotia

- (A). ACOA contribution¹
- 50% of eligible capital cost² \$3,250,000
- (B). Loan insurance on 85% of private capital borrowed - possible by ACOA, that is in this example loan insurance on:
(\$6,750,000 - \$3,250,000 - 1,350,000) x 85% \$1,827,500
(Note: 1% interest is charged for this insurance.)
- (C). Interest buy-down is available from ACOA on all loans taken to carry a project. This buy-down can be up to 6%, and for as many as 7 years (in practice, a lesser offer is more typical).
- (D). Investment Tax Credit³ - 15% of eligible private capital investment (only in Atlantic Canada). In this example, \$ 525,000
- (E). Employment and Immigration Canada "Canadian Job Strategy" program offers subsidies for job development, training of up to 60% of wages for up to 52 weeks. Exact level, duration, no. of employees, etc., etc., have to be negotiated on the individual company basis.

OPTION 2

Plant located on Cape Breton Island

- (A). Enterprise Cape Breton (specific part of ACOA) special contribution¹ - 60% of eligible capital cost² \$3,900,000
- (B). Loan insurance on 85% of private capital borrowed, possibly from ACOA, that is loan insurance in this example on:
(\$6,750,000 - 3,900,000 - 1,350,000) x 85% \$1,275,000
(Note: 1% interest is charged for this insurance.)
- (C). Interest buy-down is available from ACOA on all loans taken to carry a project. This buy-down can be up to 6%, and for as many as 7 years (in practice, a lesser offer is more typical).
- (D). Special Investment Tax Credit³ in Cape Breton - 30% of private capital investment. In this example, \$855,000
- (E). Employment and Immigration Canada "Canadian Job Strategy" - like on mainland Nova Scotia.

Alternative/Additional Incentives Available

- a. As an alternative to loans from private financial institutions, Nova Scotia Business Capital Corp. (provincial crown agency) offers loans to companies charging approximately financial market interest rate. These loans can not be insured by ACOA, nor can the ACOA interest rate buy-down apply.
- b. Companies performing R&D in Atlantic Canada receive 30% R&D Tax Credits (in the rest of Canada it is 20%).
- c. Companies performing R&D in Nova Scotia receive an additional 10% R&D Tax Credit against the provincial part of the corporate income tax.
- d. In the case of companies requiring special training for the employees, the Government of Nova Scotia, through its Vocational Training Department, is ready to negotiate a special agreement with those companies, sharing the cost

of training, organising the proper execution of this training.

¹ Contribution can be offered in the form of a grant or repayable contribution. In some cases, (high profitability) repayable contribution is more beneficial to the enterprise because of the higher CCA and Investment Tax Credit.

² New machinery, equipment and building are eligible; land is not.

³ Can be carried back 3 years and forward 10 years. In practice the amount of credit will be a little lower, depending on CCA and government contribution involved in interest buy-down. The benefit of interest buy-down is calculated using NPV. Rates shown are effective as of January 1, 1989.

4 Taxation

Corporate Income Tax Rates..... 4.2

**Sales, Customs and Excise
Taxes..... 4.6**

Municipal Tax Rates..... 4.7

Taxation

The three levels of government in Canada (i.e. federal, provincial and municipal) have distinct responsibilities and taxing authority under the Canadian Constitution. The Federal Government has general taxing powers and levies income tax, excise and sales tax and customs duties. The Province can only apply "direct taxes" for provincial purposes and some provincial responsibilities have been delegated to municipalities which levy taxes on real estate and business properties, usually on the basis of the value of the property occupied and the type of business conducted.

Note: Information in this section is of a general character. When engaged in actual project planning, it is advisable to contact a Canadian tax advisor.

Corporate Income Tax Rates

Businesses in Canada pay corporate income taxes at both the federal and provincial level.

The basic rate of tax is 28% federally and 15% provincially. In addition, a surtax of 3% is applied currently at the federal level to give an overall effective top rate of 43.84%. However, there are significant tax rate reductions available to certain types of corporations and/or businesses.

Small Business Deduction

The Small Business Deduction is available to Canadian-controlled private corporations involved in active business operations.

For corporate income tax purposes, a "small" business is defined in terms of annual taxable income rather than in terms of sales or number of employees. Thus a firm with many employees and large sales may be a "small" business in a given year.

The SBD results in a 16% reduction in the federal tax rate and a 5% reduction in the provincial rate on the first \$200,000 of annual taxable income. Taxable income above the \$200,000 level is taxed at the 43.84% level referred to above. As a result of the Small Business Deduction, eligible corporations in Nova Scotia pay tax at an effective rate of 22.36% of the first \$200,000 of annual taxable income.

Nova Scotia New Business

As an incentive to formation of new business ventures, the *provincial* rate of tax in Nova Scotia is further reduced to 0% for the first two fiscal years on the first \$200,000 of annual taxable income.

Manufacturing and Processing Deduction

Corporations that engage in manufacturing and processing activities, but are not eligible for the Small Business Deduction, are entitled to reductions in federal tax payable according to the following schedule:

July 1/88 to June 30/89	2%	reduces basic rate to 26%
July 1/89 to June 30/90	3%	reduces basic rate to 25%
July 1/90 to June 30/91	4%	reduces basic rate to 24%
July 1/91 onward	5%	reduces basic rate to 23%

Losses and Write-Offs

Losses incurred from active business operations can be deducted from income earned in previous or ensuing years for tax purposes.

Losses can be carried back up to three years to reduce taxable income in those years which will result in a refund of tax paid, or losses can be carried forward for up to seven years and deducted against income earned in those years.

Capital losses may only be deducted from capital gains. Capital losses may be carried back three years and forward indefinitely.

While depreciation expense is not deductible for tax purposes, the Income Tax Act provides for an allowance to be claimed in respect of capital expenditures. This deduction is referred to as *capital cost allowance*.

Capital Cost Allowance

The rates for capital cost allowance (CCA) are generally applied on a declining balance basis. Rates for specific assets are defined in the Income Tax Act. The following list includes some of the most frequently encountered groups of assets and rates:

Land	0%
Buildings	4%
Furniture and equipment	20%
Automobiles	30%
Manufacturing machinery and equipment	35% *(in 1990 the rate will be 30%)
Small tools	100%

Note that only one half the capital cost allowance regularly available can be claimed in the year of acquisition of the asset.

Capital cost allowance can be claimed only on the cost of the acquired asset less any government grants and/or tax credits received.

For CCA purposes, the cost base of these assets must be decreased by an amount equal to the development incentive. Contributions to operating costs must be deducted against those expenses to which the funds were applied.

Schedule II of the Income Tax Act details all rates and classes extensively.

Investment Tax Credits

A 15% investment tax credit (30% in Cape Breton Island and in Guysborough County) is available for specified new projects on new assets (including land) purchased for manufacturing and processing.

Investment tax credits are applied directly against federal tax otherwise payable fully for the first \$24,000 of taxes and at a rate of 75% thereafter. Corporations eligible for the small business deduction and with taxable income less than \$200,000 are entitled to a 40% cash refund of the unused credits earned in the year. Unused credits can be carried forward up to ten years and backward three years and applied to federal income taxes otherwise payable, within specified limits.

Research and Development Tax Credits

In Canada, special federal incentives apply to businesses carrying on scientific research and experimental development activities.

Capital and current expenditures on research and development activities qualify for a 35% tax credit for companies eligible for the Small Business Deduction on the first \$2,000,000 of expenditures in a year. For other companies, the R&D tax credit in Nova Scotia and Atlantic Canada is 30% (20% elsewhere in Canada).

Corporations qualifying for the Small Business Deduction, and with taxable income less than \$200,000 annually, are eligible for a 100% refund of the credit in respect of current expenditures.

A 40% refund is available to other Canadian-controlled private corporations in respect of capital expenditures.

All other corporations are eligible for a 20% refund of the credit.

Nova Scotia provides an additional tax credit of 10% of qualifying scientific research expenditures against provincial income taxes otherwise payable.

Nova Scotia also provides a 100% refund of the provincial sales tax (called the Health Services Tax) paid on machinery and equipment used in research and development.

CORPORATE INCOME TAX

November 14, 1988

FEDERAL

	OLD RATES	NEW RATES EFFECTIVE JULY 1 EACH YEAR			NOTES
		1988	1989	1990	
General Business	36	28*	28	28	Tax Reform June 18, 1987. Tax Reform June 18, 1987.
Manufacturing Business	30	26	25	24	
General Small Business	15	12	12	12	
Manufacturing Small Business	10	12	12	12	Tax Reform June 18, 1987 - Canadian Controlled Private Corporations where taxable income \$200,000 or less.
Capital Cost Allowance (CCA)					
Manufacturing Building	3yr. straight line 5% declining balance	40 4	35 4	30 4	Other assets different rates apply. CCA can be claimed only on net cost to the company, that is, on values net of gov't grants and tax credits. "Put in use" rules.

Investment Tax Credits

	NEW RATES EFFECTIVE JANUARY 1 EACH YEAR		
Atlantic Canada & Gaspe	20	15	15
Mfg. in designated Regions	60/40	30	30
Cape Breton Island/Guyborough County			
Rest of Canada	7 or 5	3	NIL

NOTE: ITC is calculated on net cost to the company only.
Limitations: 1. General - 3/4 of federal tax payable.
2. Full offset on business income eligible for small business taxation.

R&D-Current(operating)Capital Tax Credits scientific research expenditures

	30	30	30	30
Atlantic Canada & Gaspe				
Rest of Canada	20	20	20	20
Small Business	35	35	35	35

Buildings not specific for R&D activities excluded from eligibility.
Buildings not specific for R&D activities excluded from eligibility.
Eligibility rules like those that apply for small business tax rate.

Investment and R&D Tax Credit

Can be carried back 3 years and forward 10 years.

Refundability

Only on R&D Tax Credits

35% of first 2 million on Tax Credit due to current (operating) scientific research expenditures. 20% of all other Tax Credits due to current and capital expenditures for R&D. For small business refundability of 40% of unused Investment Tax Credit.

PROVINCE OF NOVA SCOTIA

General Corporate Income Tax	15%
Small Business Corporate Income Tax	10%
R&D Tax Credit (rules like Federal)	10%

First 2 yrs tax holiday in N.S.
In N.S. against provincial part of income tax payable.

*NOTE: Temporary 3% corporate surtax exists at the moment which makes rate 28% to be effectively 28.84% **(& subsequent years)

Sales, Customs and Excise Taxes

Federal Sales Tax Exemptions

Scientific research equipment, materials and supplies purchased by manufacturers for use by them directly in the development of new products and processes are exempt from federal sales tax.

Duty-Free Entry of Imported Goods

Under the Customs Tariff, numerous imported goods are allowed entry to Canada duty-free if they are used for the manufacture of specific goods. The benefits of this program are realized at time of entry, or upon submission of end use certificates as required by regulations.

Remission of Duty and Associated Sales Tax

Customs duties and associated sales taxes are remitted in certain circumstances. There are a number of standing or continuing remission orders that provide relief in special situations. Remission is used occasionally as an interim measure until amendments can be made to the customs tariff. It is also used as an instrument of tariff policy to support industrial rationalization or development.

Machinery Program (MACH)

MACH provides for the remission of duty on certain specific imported machinery and related equipment for production and service industries, above a minimum of \$500 dutiable value. The amount of sales tax owing is also reduced via the reduced duty-paid value. For this program to apply, there must not be reasonably equivalent machinery available from production in Canada.

Duty Drawback

Drawback legislation provides for refunds of customs duties and sales taxes to help manufacturers compete with foreign manufacturers both abroad and at home. For Canadian exporters, it grants a drawback of duty and sales taxes paid on imported products used in the manufacture of goods subsequently exported.

Municipal Tax Rates

Commercial Assessment

The municipal property tax is based on property assessment, undertaken by assessors empowered by the Provincial Department of Municipal Affairs.

The Assessment Act states specifically what is included as "assessable property". Generally speaking, for a manufacturer, all land, buildings, machinery and equipment form part of the assessment base. The assessed value of machinery and equipment is determined by using the installed cost of the machinery and equipment when new, and an allowance is made for observed depreciation. (For purpose of general calculation, an unofficial figure of 50% can be used.)

All manufacturers and processors are entitled to a rebate of 80% of taxes on the first \$1 million of assessment on machinery and equipment.

Business Occupancy

In addition, any person occupying or using any commercial property (except as exempted under the Act) is assessed a *business occupancy* assessment.

All manufacturers and processors are liable to a business occupancy assessment of 50% of the assessed value of the property. (Note: Halifax City is an exception, and has a separate business occupancy rate of \$3.36 per \$100 in 1988.)

Excluded from the assessment base used for calculating a business occupancy assessment are:

- all machinery, equipment, apparatus and installations, whether or not they are affixed to land and buildings;
- structures (other than buildings) not providing shelter for people, plant or moveable property (e.g. transmission towers).

It should be noted that machinery, equipment and installations that provide services to a building are included in the base for calculating the business occupancy assessment.

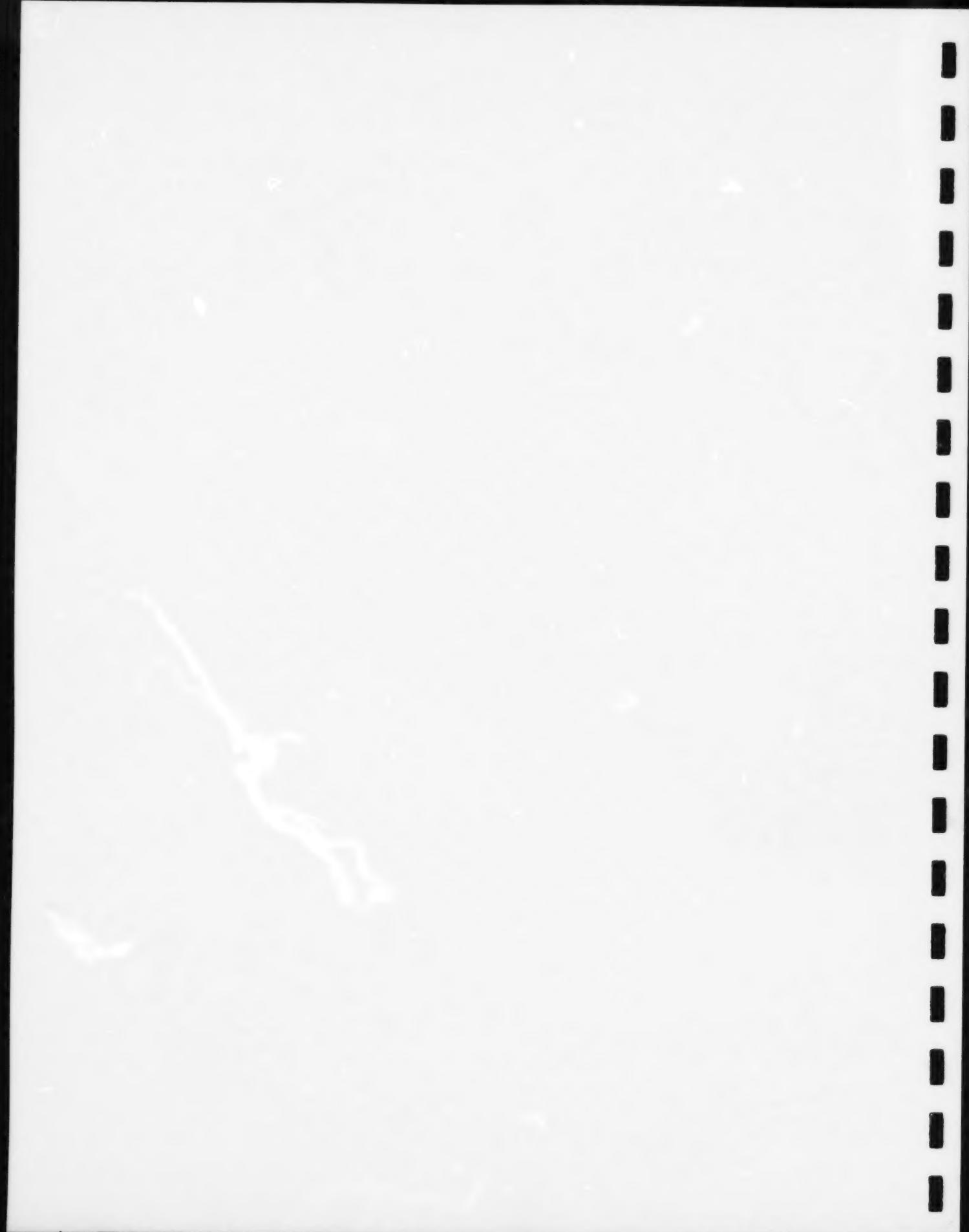
MUNICIPAL TAX RATES FOR 1988

Rates per \$100 of Assessment			Rates per \$100 of Assessment		
	<u>Residential</u>	<u>Commercial</u>		<u>Residential</u>	<u>Commercial</u>
CITIES					
Halifax	1.28	3.36/3.41	Stellarton	1.95	3.25
Dartmouth	1.437	3.149	Stewiacke	1.48	1.99
Sydney	1.82	3.95	Sydney Mines	1.85	3.76
			Trenton	2.00	4.62
TOWNS			Truro	1.41	2.41
Amherst	1.83	3.12	Westville	2.10	3.50
Annapolis Royal	1.69	2.99	Windsor	2.07	3.00
Antigonish	1.00	2.50	Wolfville	1.51	2.70
Bedford	1.311	2.58	Yarmouth	1.43	2.76
Berwick	1.44	2.30			
Bridgetown	1.87	2.59	MUNICIPALITIES		
Bridgewater	1.40	2.40	Annapolis	0.93	1.98
Canso	1.93	2.63	Antigonish	0.95	1.25
Clark's Harbour	1.58	2.42	Argyle	0.73	1.50
Digby	1.77	3.25	Barrington	0.90	1.42
Dominion			Cape Breton	0.89	2.38
Glace Bay	2.03	4.16	Chester	0.70	1.30
Hantsport	1.81	2.60	Clare	0.98	1.51
Kentville	1.43	2.73	Colchester	0.50	1.31
Liverpool	1.99	3.24	Cumberland	0.87	1.77
Lockeport	1.64	2.96	Digby	1.19	1.60
Louisbourg	1.92	3.42	Guysborough	1.21	1.90
Lunenburg	1.91	3.15	Halifax	0.635	1.62
Mahone Bay	1.75	2.10	Hants East	0.79	1.29
Middleton	1.89	2.69	Hants West	1.00	1.50
Mulgrave	1.73	3.20	Inverness	1.44	2.29
New Glasgow	2.15	3.80	Kings	0.62	1.425
New Waterford	1.71	3.64	Lunenburg	0.85	1.60
North Sydney	1.97	3.40	Pictou	0.84	1.30
Oxford	1.78	3.13	Queens	0.67	1.38
Parrsboro	1.93	3.00	Richmond	0.76	1.25
Pictou	2.10	3.75	Shelburne	1.08	1.46
Port Hawkesbury	1.90	3.08	St. Mary's	0.85	1.70
Shelburne	1.76	2.80	Victoria	1.01	1.97
Springhill	2.20	4.26	Yarmouth	0.81	1.93

Note: Services are not uniform from one municipal unit to another so care should be taken when comparing tax rates. In addition to these general rates, rural municipalities are empowered to levy area rates for specific services. Some cities also have a user charge for pollution control monitored through water usage.

5 Labour Force

Labour Force Characteristics.....	5.2
Wage Rates.....	5.3
Workstoppages.....	5.6
Distribution of Union Members.....	5.7
Employee Benefits.....	5.8
Employer Costs of Employee Fringe Benefits.....	5.9
Nova Scotia Training and Employment Program.....	5.10
Canadian Jobs Strategy.....	5.11



Labour Force

One of Nova Scotia's most valuable assets is a stable labour force with a proven ability to work with managers from many different countries.

The availability of skilled labour in Nova Scotia is ensured by continuing education, apprenticeship, and on-the-job industrial training for persons entering the work force.

The province has numerous modern vocational high schools and community colleges to train young people in the many technical occupations required by the industrial community. Beyond this level, diversified regional institutes of technology provide forms of advanced training. For example, the new Automated Manufacturing Technology Centre at the Institute of Technology, with its unique robotics training course, ensures a highly skilled work force for tomorrow's integrated manufacturing technology.

Table 5-1. Labour Force Characteristics, Nova Scotia, 1980-1988

<u>Year</u>	<u>Population 15+ (000s)</u>	<u>Labour Force (000s)</u>	<u>Employed (000s)</u>	<u>Unemployed (000s)</u>	<u>Unemployment Rate %</u>	<u>Participation Rate %*</u>
1980	619	356	321	35	9.7	57.4
1981	626	359	322	36	10.2	57.3
1982	633	361	313	47	13.2	57.0
1983	642	369	320	49	13.2	57.4
1984	653	387	337	51	13.1	59.3
1985	664	391	337	54	13.8	59.3
1986	671	398	344	53	13.4	59.3
1987	677	405	354	51	12.5	59.8
1988P	683	414	371	43	10.4	60.6

Source: Statistics Canada, 71-201

*Labour force as a percentage of population 15 years and over.

PPreliminary estimate.

Table 5-2. Civilian Employment By Industry, Nova Scotia, 1988P

<u>Industry Sector</u>	<u>Civilian Employment</u>
Service Producing	270,000
Community, business, and personal services	123,000
Trade	69,000
Public administration	32,000
Transportation, communication, and other utilities	28,000
Finance, insurance, and real estate	18,000
Goods Producing	100,000
Manufacturing ¹	48,000
Construction	24,000
Agriculture	8,000
Other primary (forestry, mining, fishery)	20,000
Total ²	371,000

Source: Statistics Canada, 71-001

PPreliminary estimates.

¹Manufacturing employment in this table is derived from the Labour Force Survey, as conducted by Statistics Canada. The employment figure for manufacturing in other tables is based upon the complete census of manufacturing industries. Therefore, the above employment should be regarded as an estimate.

²May not add to total due to rounding.

Table 5-3. Average Weekly Wages And Salaries, Industrial
Aggregate, Nova Scotia And Canada, 1980 - 1987

<u>Year</u>	<u>Nova Scotia</u>	<u>Canada</u>	<u>N.S. as % of Canada</u>
1980	\$265.95	\$317.39	83.8
1981	\$296.35	\$355.12	83.4
1982	\$329.12	\$390.78	84.2
1983 ¹	\$342.77	\$390.37	87.8
1984	\$360.22	\$405.13	88.9
1985	\$376.54	\$419.27	89.8
1986	\$390.31	\$430.94	90.6
1987	\$400.02	\$442.74	90.4

Source: Statistics Canada, 72-002

¹Figures not strictly comparable with former years. Starting in March, 1983, the data are the industrial aggregate based on the 1970 standard industrial codes.

Table 5-4. Average Weekly Wages and Salaries By Industry,
Nova Scotia, 1986-1988

<u>Industry</u>	<u>August 1986</u>	<u>August 1987</u>	<u>August 1988</u>
Forestry	\$587.43	\$612.68	\$645.47
Mines, quarries, and oil wells	369.20	355.99	392.61
Manufacturing	424.24	447.23	463.70
Construction	444.33	472.88	490.20
Transportation, communication, and other utilities	493.53	494.09	552.01
Trade	270.22	277.28	290.81
Finance, insurance, and real estate	410.54	400.87	444.22
Community, business, and personal services	362.48	367.16	381.86
Public administration	492.31	526.97	530.82
Industrial aggregate*	391.82	401.68	422.44

Source: Statistics Canada, 72-002

*Covers all major groups except agriculture, fishing, household services, religious organisations, and military personnel.
This indicator is considered an average measure of weekly wage level in the province.

Table 5-5. Hourly Labour Rates*, Nova Scotia

<u>Area</u>	<u>General Labour</u>	<u>Semi- Skilled**</u>	<u>Skilled</u>
Amherst	\$4.50-5.75	\$6.00-7.50	\$7.00-12.00
Bridgewater	5.00-6.00	6.00-7.50	8.00-11.00
Halifax-Dartmouth	4.50-6.50	6.00-9.00	7.50-14.00
Kentville	4.50-6.00	6.00-8.50	7.50-11.00
New Glasgow	4.50-6.00	5.50-7.50	7.00-13.00
Port Hawkesbury	4.50-5.50	5.50-7.50	7.00-13.00
Sydney	4.50-6.50	5.50-8.00	7.50-14.00
Truro	4.50-6.50	5.50-8.00	8.00-13.00
Yarmouth	4.50-6.00	5.50-7.00	5.85-7.50

Source: Canada Manpower Centres and Nova Scotia Department of Labour & Manpower

*Rates are nonunion and are not applicable to the construction sector.

**Applicable to those with some training and/or above-average experience.
Generally represents a premium paid by employers who wish to be more selective.

Note: Provincial minimum wage effective January 1, 1989 is \$4.50 per hour.

Table 5-6. Wage Rates in Selected Occupations and Trades, 1987

<u>Office Occupations</u>	<u>Per Year</u>
Accounting clerk.....	\$14,500-19,500
Bookkeeper.....	15,500-26,500
Clerk.....	12,500-21,000
Computer operator.....	16,500-24,000
Cost/order/stock clerk.....	12,000-20,000
Data entry operator.....	14,000-18,000
Filing clerk.....	13,000-15,000
Office manager.....	18,000-35,000
Programmer.....	18,000-30,000
Stenographer/secretary.....	14,500-21,000
Typist/dicta typist.....	13,000-17,000
 <u>Manufacturing Trades</u>	 <u>Per Hour</u>
Mechanical technician.....	\$10.00-13.00
Avionics technician.....	10.00-13.00
Electronics technician.....	10.00-13.00
Assembler.....	6.50-9.00
Sheet metal worker.....	13.00-22.00
General machinist.....	8.00-15.00
Welder.....	7.00-14.00
Combination welder.....	8.00-14.00
Millwright.....	10.00-14.00
Pipe fitter.....	9.00-11.00
Carpenter.....	10.00-12.00
Tool and die maker.....	11.00-14.00
 <u>Maintenance and Service Trades</u>	 <u>Per Hour</u>
Electrician.....	\$8.00-17.00
Carpenter.....	7.00-14.00
Boiler operator.....	8.50-14.00
Janitor/cleaner.....	5.00-10.50
Labour nonproduction.....	5.00-11.00
Security officer.....	6.00-8.75
Shipper.....	5.00-9.50
Stationary engineers.....	8.50-13.50
Truck driver.....	6.00-11.00
Material handler.....	4.50-6.00
Painter.....	6.00-13.00
Plumber.....	8.00-14.00

Source: Canada Manpower Centres and Nova Scotia Department of Labour & Manpower

Note: Rates are averaged for these job classifications. Additional rates can be obtained from the Canada Employment and Immigration (Canada Manpower) offices throughout the province if more detailed descriptions of job requirements and locations are supplied.

Table 5-7. Person Days Lost Per 10,000 Total Person Days of Work for the Manufacturing Sector by Province, 1985-1987

Province	1985	1986	1987
Nova Scotia	10.9	13.6	2.4
New Brunswick	65.1	13.6	14.2
Prince Edward Island	85.8	-	-
Newfoundland	125.6	9.5	7.6
Quebec	52.0	39.5	43.3
Ontario	22.4	18.8	31.2
Manitoba	15.8	8.7	8.4
Saskatchewan	26.6	22.7	-
Alberta	13.0	80.0	12.6
British Columbia	6.9	26.2	68.8
Canada	30.5	27.5	34.4

Source: Labour Canada, "Strikes & Lockouts Canada" (an annual report); Statistics Canada, Cat. No. 71-001

Formula = person days lost/(working days (250) x total employment).

Table 5-8. Person Days Lost Per 10,000 Total Person Days of Work Due to Work Stoppages by Industry, Nova Scotia, 1986-1988

	1986	1987	Sept. 30 1988
Manufacturing	* 13.6	2.4	*** 50.6
Construction	-	0.1	-
Transportation/ communications	4.8	1.1	-
Trade	-	0.2	-
Service (community business)	** 8.2	0.2	**** 1.6
Administration	-	-	5.6
Mining	-	1.7	-
Total	4.8	0.8	7.6

Source: Nova Scotia Department of Labour & Manpower, Research Division

Formula = man days lost/(working days (250) x total employment).

*Carryovers from 1985: Lunenburg Foundry, 65 employees, 11,700 person days lost; Nystone Chemicals, 11 employees, 2,761 person days lost. No new legal manufacturing workstoppages in 1986. There were two one-day illegal workstoppages.

**School boards (drivers and janitors).

***Sysco, February and part of March, involved 1,200 workers for 34 work days.

****BFI, 13 people since February 1988 accounts for 2,373 person days.

Table 5-9. Distribution of Union Members by Industry

Industry	1984		1985	
	#	% of Total Membership	#	% of Total Membership
Commercial business and personal service	31,216	(30.1%)	33,766	(32.6%)
Public administration and defence	26,949	(26.0%)	28,539	(27.6%)
Manufacturing	17,933	(17.3%)	15,837	(15.3%)
Construction	8,853	(8.5%)	8,371	(8.1%)
Communication	4,915	(4.7%)	2,829	(2.7%)
Transportation	4,889	(4.7%)	4,316	(4.2%)
Mines, quarries, and oil wells	3,797	(3.7%)	3,750	(3.6%)
Trade	3,212	(3.1%)	5,836	(5.6%)
Agriculture	62	(0.1%)	184	(0.2%)
Finance and insurance	151	(0.2%)	132	(0.1%)
Other utilities	1,392	(1.3%)	N/A	N/A
Fish and trapping	325	(0.3%)	N/A	N/A
Total Union Memberships*	103,694	(100.0%)	103,560	(100.0%)
Total Labour Force	387,000		391,000	

Source: Nova Scotia Department of Labour and Manpower, Research Division

*Note: Overall, approximately 26.8% in 1984 and 26.5% in 1985 of the Nova Scotia labour force was unionised. It is impossible to provide accurate measurement of unionisation level as % of employment on a sector-by-sector basis, because of the differences in methodology between Statistics Canada (see Table 5-2) and the Nova Scotia Department of Labour and Manpower (Table 5-9) and the fact that information regarding the number of union members unemployed is also not available.

Employee Benefits

General employee benefit programs requiring employers' contribution include:

- the Canada Pension Plan
- Unemployment Insurance
- Worker's Compensation against accidents
- a provincial vacation pay program

Under federal law, every employer is responsible for deducting, remitting, and reporting employee's personal income tax withholdings, Unemployment Insurance premiums, and Canada Pension Plan deduction.

Contributions to both the Unemployment Insurance Commission and the Canada Pension Plan are cost-shared by the employer and the employee. An employer must remit 1.4 times the amount of the employee's UIC premium and an amount equal to the employee's Canada Pension Plan premium.

For further information and to obtain an employer number, contact:

Revenue Canada, Taxation
Halifax District Office
P.O. Box 638
1557 Hollis Street
Halifax, Nova Scotia
B3J 2T5
(902) 426-3296

Any business which employs more than two workers in an industry must register with the provincially administered accident insurance program, Workers' Compensation Commission. The insurance rates vary from industry to industry, and from occupation to occupation, depending on historical experience in regard to industrial accidents and employment related disabilities.

Table 5-10 provides a sample of employer costs of employee fringe benefits.

Table 5-10. Typical Employer Costs of Employee Fringe Benefits, Nova Scotia Manufacturing Firms, 1988

<u>Benefit</u>	<u>Weekly Cost on Basis of Average Wage of \$450.81*</u>	<u>% of Gross Salaries and Wages</u>
Canada Pension Plan: contribution equal to employee contribution to a maximum of \$478.00 per annum**	\$8.02	1.78%
Unemployment Insurance: 1.4 times employee contribution, \$10.59 (maximum of \$966.78)	14.83	3.29%
Worker's Compensation: \$1.00 per \$100.00 of wages (average rate)	4.51	1.00%
Retirement pensions: an average cost	18.03	4.00%
Health Plan***: an average cost	3.38	.75%
Statutory holidays: 5 compulsory; 9 generally given	16.23	3.60%
Vacation: 2 weeks compulsory; average of 2.5 weeks given for all employees	22.54	5.00%
Total (see Note below)	\$87.54	19.42%

Source: Revenue Canada and Nova Scotia Department of Industry, Trade, and Technology

*Average weekly earnings in Nova Scotia manufacturing establishments. Statistics Canada, Cat. 73-002, June 1988.

**For 49 weeks only.

***Comprehensive dental and medical. This would 'top up' the general medical and hospital coverage which is provided by Nova Scotia Medical Services Insurance, which is funded by the provincial government through a general sales tax called the Health Services Tax.

Note: The Canada Pension Plan, Unemployment Insurance, Worker's Compensation, and paid vacations are legislated employer contributions; together with compulsory statutory holidays, this obligatory fringe benefit package accounts for 12 to 13 percent of the wage bill. The average corporate fringe benefit package, including nonlegislated items, usually approximates 18 to 21 percent of the wage bill.

Nova Scotia Training and Employment Program (NSTEP)

NSTEP is designed to create additional employment opportunities through structured training on the job.

The Nova Scotia Department of Advanced Education and Job Training approves each training opportunity and provides financial assistance of up to \$2.00 per hour for a maximum of 20 weeks.

Objectives

NSTEP has the following objectives:

- To create additional employment opportunities for unskilled employees, primarily in the resource industry sector and small business sector.
- To help train new employees, thereby generating permanent employment opportunities.
- To provide financial assistance to employers who are training employees on the job, and are realizing low productivity during the initial employment period.

Eligibility

Employers eligible for NSTEP assistance are those who operate in Nova Scotia, and are involved in resource industries in the province, or small businesses with less than 50 employees and less than \$2,000,000 in sales.

General Guidelines

- The proposed trainee must be a new employee.
- The employer must follow a structural training outline, developed or approved by the Department of Advanced Education and Job Training.
- The position created must not be a part-time one.
- NSTEP applies to lower level skills, not high technology.
- A qualified instructor/employer must be on site to provide the necessary training.

Canadian Jobs Strategy

The Canadian Jobs Strategy has been designed to provide assistance to employers in specific areas.

For further information on how these programs can work for participating enterprises, direct contact with a local Canada Employment Centre is recommended.

The following outlines several of the assistance programs available to new businesses establishing in Nova Scotia.

Job Development Program

The objective of the Job Development Program is to provide training and work experience for long-term unemployed individuals by providing training costs, wage subsidies, and other specified costs to employers who create new jobs.

Assistance available for on-the-job training:

General Projects

The projects must create three or more jobs and last between 16-52 weeks.

- Up to 60 percent of wages paid up to \$7.50 per hour with a weekly maximum of \$300 per participant.
- Wages for administrative staff involved up to local prevailing wage rate.
- Up to \$8 per participant training hour.
- Up to \$10,000 per disabled participant to help defray the cost for their participation.

Individually Subsidized Jobs

Jobs for employment disadvantaged must last 16-52 weeks; other participants, 16-26 weeks.

- Up to 60 percent of wages paid up to \$7.50 per hour with a weekly maximum of \$300 per participant.
- Up to \$8 per participant training hour.
- Up to \$10,000 per disabled participant to help defray the cost for their participation.

Skill Shortages Program

The Skill Shortages Program provides training costs, wage subsidies, and other costs to train employed or unemployed persons in areas of regional or potential occupational skill shortages. Training agreements can operate for a minimum of three weeks (or 80 hours) to a maximum of three years.

Assistance available for work-based training:

- Up to 60 percent of regular weekly wages paid during off-the-job training and up to 25 percent of weekly wages paid during on-the-job training up to \$7.50 per hour and a weekly maximum of \$300 per participant.
- Up to \$20 per participant training hour.
- Up to \$10,000 per disabled participant to help defray costs.

Unemployment Insurance (UI) Job Creation Program

The objective of the UI Job Creation Program is to link up unemployed workers with businesses and organizations. Projects must create at least three new jobs, last between 6 and 52 weeks and not displace any existing employees.

- Participants receive enhanced Unemployment Insurance (UI) benefits. Employers are encouraged to top-up wages.
- Employers may receive up to \$125 per worker per week for other related costs such as materials and supplies.
- Private sector sponsors must contribute at least 2/3 of the total cost.

Job Entry Program

The Job Entry Program is designed to provide on- and off-the-job training and work experience for:

- Youths who have difficulty making the transition from school to work (entry option).
- Women who have difficulty making the transition from home to work (reentry).
- Persons who face significant barriers in securing and maintaining employment.

Assistance available:

- Funds to pay participant allowances.
- Funds to pay wages of administrative staff involved up to the prevailing wage rate.
- A contribution towards mandatory employment-related costs such as Canada Pension Plan, Unemployment Insurance, vacation pay, etc.
- Up to \$50 per participant week for overhead costs such as materials, travel, licenses, etc.
- Up to \$8 per participant training hour for off-site training.
- Up to \$10,000 per disabled participant to help defray participation costs.

6 Power and Telecommunications

Nova Scotia Power Corporation.....	6.1
Power Rates.....	6.2
Power System Map.....	6.4
Telecommunications.....	6.5

Nova Scotia Power Corporation

The Province of Nova Scotia is expected to experience a steady increase in end-use energy demand through the next decade and beyond.

Nova Scotia Power will be operating in a climate with significant potential for change.

A revitalized steel industry and ongoing expansion in the pulp and paper industry, combined with usual growth, is expected to create a demand for an average 5% annual growth of power generation during the next ten years.

The combination of all three customer classes—industrial, domestic, and commercial—results in an annual growth average of 3.8 percent over the next 10 years. This means that, over that period, Nova Scotia Power will require 500 megawatts of new generation to meet the requirements of Nova Scotia consumers, businesses, and industries. To meet this need, Nova Scotia Power will continue as a leader in the application of new technology.

The 150 megawatt circulating fluidized bed plant proposed for Point Aconi, Cape Breton will be the largest plant of its kind ever built in North America. The technology will significantly cut down on sulphur dioxide emissions.

Nova Scotia Power has also called for proposals from the private sector to help meet 30 megawatts of capacity requirements. From early indications, a substantial share of that 30 megawatts will be generated using woodchips.

A third proposed project involves the construction of 900 to 1,200 megawatts of environmentally acceptable coal-fired generation dedicated to the New England market. "The Bluenose Project" involves a plan to export power to New England via a high-voltage undersea cable.

Nova Scotia Power is committed to supplying its customers with power while contributing to the economic development of the province. The emerging decade will provide Nova Scotia Power not only with challenges but also with further opportunities to fulfill its mandate from a business point of view, as well as from a social and economic standpoint.

Power Rates

The following rates are effective from April 1, 1983. The source is the Nova Scotia Power Corporation.

Industrial: Up to 249 KVA

Demand Charge: \$4.50 per kilovolt ampere of maximum demand per month.

Energy Charge: 9.45 cents per kilowatt hour for the first 100 kilowatt hours per month per kilovolt ampere of maximum demand.

4.75 cents per kilowatt hours for all additional kilowatt hours.

Minimum Monthly Charge: The minimum monthly charge shall be the greater of \$6.19 or the maximum demand charged for the previous December, January, February, or March at the demand charge.

Availability: The rate for industrial (up to 249 KVA) shall be applicable to electric power and energy supplied to any customer for industrial use, including farming and processing, where the regular maximum demand is less than 250 KVA.

Metering will normally be at the low voltage side of the substation. Should the customer's requirements make it necessary for the Corporation to provide primary metering, then the customer will be required to make a capital contribution equal to the additional cost of primary metering as opposed to the cost of secondary metering. Adjustment to the metered KWH usage will be made on the condition that, if metering is on the high voltage side, meter readings shall be reduced by 1.75 percent.

Industrial: 250-3,999 KVA

Demand Charge: \$6.71 per month per kilovolt ampere of maximum demand of the current or previous eleven (11) months.

25 cents per kilovolt ampere reduction in demand charge where substation is owned by the customer.

Energy Charge: 3.97 cents per kilowatt hour.

Minimum Monthly Charge: The minimum monthly charge shall be the greater of \$6.19 or the maximum demand recorded for the previous December, January, February, or March at the demand charge.

Availability: The rate for industrial (250-3,999 KVA) shall be applicable to power and energy supplied to any industrial customer having a regular demand of 250 KVA but less than 4,000 KVA.

Special Conditions: (1) Metering will normally be at the low voltage side of the substation. Should the customer's requirements make it necessary for the Corporation to provide primary metering, the customer will be required to make a capital contribution equal to the additional cost of primary metering as opposed to the cost of secondary metering. Adjustments to the metered KWH usage will be made under the following conditions. (a) If the substation high voltage side is 69 KV or higher and metering is on the high voltage side, meter readings shall be reduced by 1.75 percent. (b) If the substation high voltage side is lower than 69 KV and metering is on the low voltage side, meter readings shall be increased by 1.75 percent. (2) The Corporation may withdraw the availability of this rate to any specific customer, if, in the opinion of the Corporation, the customer is not maintaining a billing demand of 250 KVA.

Large Industrial: 4,000 KVA and Over

Demand Charge: \$6.03 per month per kilovolt ampere of maximum demand of the current or previous eleven (11) months.

25 cents per kilovolt ampere reduction in demand charge where the substation is owned by the customer.

Energy Charge: 3.71 cents per kilowatt hour.

Minimum Monthly Charge: Minimum monthly charge shall be the maximum demand charge of the previous (11) months.

Availability: The rate for large industrial (4,000 KVA and over) shall be applicable to three phase power and energy supplied at transmission voltage to any industrial customer having a regular demand of 4,000 KVA or more.

At the option of the Corporation, supply may be at distribution voltage. Meter readings shall be increased by 1.75 percent for each transformation between the meter and the transmission line supplying service, to adjust for transformation losses.

Metering will normally be at the low voltage side of the transformer. Should the customer's requirements make it necessary for the Corporation to provide primary metering, the customer will be required to make a capital contribution equal to the additional cost of primary metering as opposed to the cost of secondary metering.

The Corporation may withdraw the availability of this rate to any specific customer, if, in the opinion of the Corporation, the customer is not maintaining a regular demand of 4,000 KVA.

Interruptible

Demand Charge: Nil.

Energy Charge: 3.60 cents per kilowatt hour.

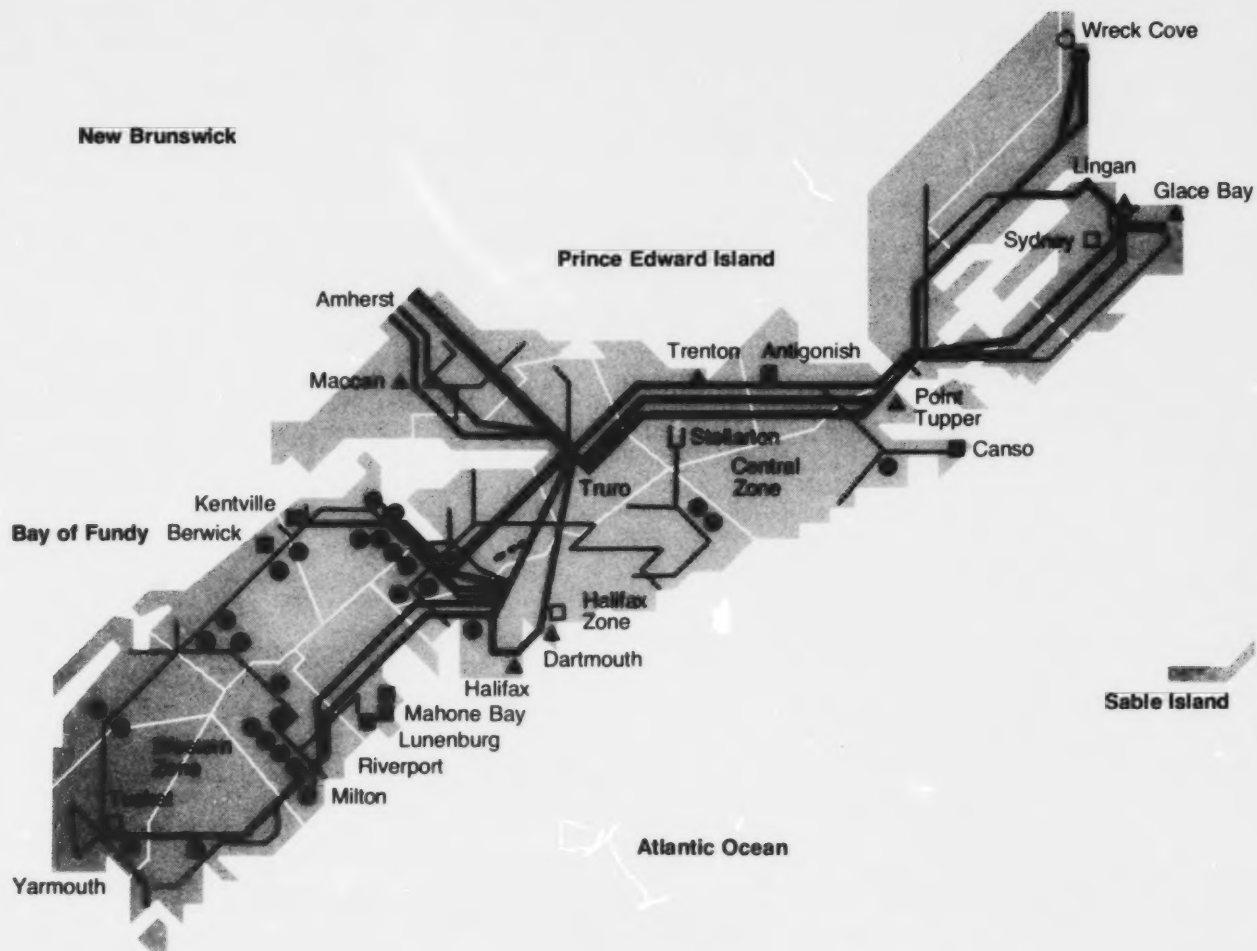
Availability: This rate shall be applicable to industrial loads in excess of 2,000 KVA demand where: (a) The customer operates generating capacity upon which the Corporation may call for back-up capacity in emergency situations or the customer has made suitable provisions for load-shedding in case of system disturbances; (b) The customer agrees that his load may be shed without notice when available capacity is required to serve firm load customers; (c) In the opinion of the Board of Commissions of Public Utilities, the provisions made are adequate to ensure that the load will not impose a firm demand on the Corporation's system.

Power System Map

■ 345 kV line
 ■ 230 kV line
 ■ 230 kV line under construction
 — 138 kV line

--- 138 kV line under construction
 — 69 kV line
 ■ Municipal Utilities
 ▲ Steam

□ Gas Turbine
 ● Hydro
 Under Construction
 ○ Hydro (Gisborne, 3.5 MW)



Telecommunications

Maritime Telegraph & Telephone Company, Limited

Maritime Tel & Tel is Nova Scotia's major supplier of voice, data and image communications systems, and has been serving the province for over 79 years. The company has evolved into a modern telecommunications business making use of the latest digital and fibre optics technology to offer province-wide services ranging from high speed, high volume data communications, cellular service, facsimile and electronic mail to its more traditional local and long distance telephone services.

Maritime Tel & Tel is an investor-owned public utility, traded on the Toronto Stock Exchange. The company provides reliable customer service 24 hours per day, 365 days per year, across the province. It employs over 3800 people, and is very innovative (e.g. Maritime Tel & Tel was the first utility in North America to use fibre optics).

During 1987, Maritime Tel & Tel entered another rapidly growing segment of the information systems business with an Electronic Data Interchange (EDI) service. The company completed the first sales and installations of its EDI service, Traderoute, which provides online order entry systems between buyers and sellers.

Maritime Tel & Tel also announced a partnership with Novatron Information Corporation, a Halifax company specializing in information systems linking buyers and sellers. The two companies are developing an "electronic marketplace" service as part of the Atlantic Opportunities Information Network. This service allows business and government customers to access Maritime Tel & Tel's Yellow Pages information by computer, together with comprehensive profiles of the companies represented in the database, and their products.

7 Transportation Systems

Rail, Road, Ocean, and Air Transport.....	7.1
Transportation Incentive: Atlantic Region Freight Assistance Program.....	7.2
Highways Map.....	7.4
Port of Halifax.....	7.5
Strait of Canso Port.....	7.6
Sydney Harbour Ports.....	7.7
Container Ship Services.....	7.8
Major Air Services.....	7.10
International Markets Map.....	7.11

Rail, Road, Ocean and Air Transport

Nova Scotia's transportation linkages embrace oceans and continents. Integrated with the arrival and departure of container ships are special container trains linking the Halifax terminals daily with inland terminals of Montreal and Toronto. At these terminals, container cars are linked with rail movement to Detroit, Chicago, Winnipeg, and Vancouver. Canadian National Railway has a wide range of specialized cars to handle traffic efficiently. Heated, insulated, mechanically refrigerated, wide-door, depressed centre (to handle exceptionally heavy and large loads), tri-level automobile carriers, etc. are available to clients.

Though many Nova Scotia communities have conventional rail service, a large volume of freight, including containers, is now moved on high-speed, all-weather highway systems throughout the province. These highways are linked with the TransCanada Highway and Interstate highways in the United States. In addition, sea-going ferries which carry highway transports link Nova Scotia directly with the eastern U.S. and with Canadian provinces in the Atlantic Region. Specialized commodity carriers and contract haulers are available to shippers and receivers of freight, and they provide service to and from most major Canadian and U.S. cities.

The Halifax International Airport is the major air freight and passenger terminal in the Canadian Atlantic Region. Halifax is the central point for air service in Atlantic Canada. From this airport, passengers can be in New York, Boston, Toronto, Ottawa, or Montreal in less than two hours. In less than eight hours, one can be in Paris, Frankfurt, Stockholm, Vancouver, Los Angeles, or San Francisco. Air Canada and Canadian Airlines International offer direct flights from Halifax to London and Amsterdam. In May 1989, KLM (Holland's national airline) is introducing additional service between Halifax and Amsterdam. In excess of 1.6 million passengers make use of the Halifax International Airport annually. Yarmouth and Sydney are important secondary terminals, and several community airports are maintained especially to serve business and industry, such as in Debert and Port Hawkesbury. Regional commuter airlines such as Air Nova and Air Atlantic provide regular service within Nova Scotia and the other Maritime provinces. Charter facilities are also available at most airports.

The Atlantic Provinces Transportation Commission assists in determining the best source of transportation and rates for diverse products and commodities. This organization is sponsored by the governments of Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland. To develop rate information, the following data is required: mode of transport, commodity and type of packaging, weight and/or quantity, frequency of shipments and destinations, if possible.

Transportation Incentive: Atlantic Region Freight Assistance Program

Under the Maritime Freight Rates Act and the Atlantic Region Freight Assistance Act, the Atlantic Region Freight Assistance (ARFA) Program provides lower transportation rates for manufacturers and producers in Nova Scotia and the other Atlantic Provinces.

The transportation assistance program falls into three distinct parts covering: (1) intraregional shipments; (2) westbound shipments of all commodities; and (3) westbound shipments of selected commodities. A brief description of the extent of the assistance, in relation to each of these categories, follows.

The Intraregional Subsidy Program provides a 10 percent reduction in rates for the movement of an approved list of goods that have been manufactured or produced in the Atlantic Region (referred to as Select Territory in the regulations). The carriers are reimbursed by the National Transportation Agency (NTA) for the reduction. The minimum eligible billing for the intraregional subsidy is \$50. The subsidy applies to shipments between points in the select territory (i.e., the Provinces of New Brunswick, Nova Scotia, Prince Edward Island, and the Island of Newfoundland, and that part of the Province of Quebec that is east of Levis and south of the St. Lawrence River) moving via rail, for-hire truck, water, and air modes, providing the carrier has applied for and has been granted certification by the NTA. The subsidy is paid directly to the carrier. To be eligible for the assistance, carriers are required to reflect the subsidy as a reduction in their tariff of rates and, unless otherwise authorized by the shipper, to include particulars of the gross freight charges, amount of subsidy, and net freight charges on revenue freight bills submitted to shippers.

The Basic Westbound Subsidy Program provides a reduced rate level for the movement of virtually all goods via rail and for-hire trucks originating in the Atlantic Region (select territory) and moving westbound to points in Canada outside the Atlantic Region. The subsidy is applicable regardless of the nature of the commodity and is automatically reflected in the rates published by the carriers. No action is required on the part of the shipper to obtain the benefit of this basic subsidy. The amount of the basic subsidy is 30 percent based on the proportion of the distance in the Atlantic Region to the total distance of the shipment. To illustrate, a rate on a shipment originating 500 miles east of Levis and destined to a point 500 miles west of Levis would reflect a reduction of 30 percent on one-half of the rate or 15 percent of the total rate.

The Selective Westbound Subsidy Program provides an additional reduction of 20 percent over and above the basic 30 percent westbound subsidy. It applies to the movement of a selected list of eligible commodities from points in the Atlantic Region to destinations in other parts of Canada. Similar to the basic subsidy, the amount of the selective westbound subsidy is based on the proportion of the distance in the Atlantic Region to the total distance of the shipment. In other words, if the distance in the Atlantic Region is one-half the total distance, then the amount of the selective westbound subsidy will be 10 percent of the total rate. The minimum eligible billing for the selective westbound subsidy is \$100. The selective westbound subsidy is payable to both railways and for-hire truckers in return for reducing their rates by amounts authorized by the NTA. In addition to the list of eligible commodities, additional commodity coverage is included periodically in response to applications from regional shippers to the Federal-Provincial Committee on Atlantic Region Transportation. Eligible commodities include unprocessed agricultural and fisheries products, along with commodities manufactured or processed in the region for which the full potential for adding value is achieved within the region and which generate significant economic activity.

Manufacturers and producers in the Atlantic Region should be aware of the significance of this subsidy program in reducing transportation costs on their products, thereby enabling them to compete more effectively in Canadian markets.

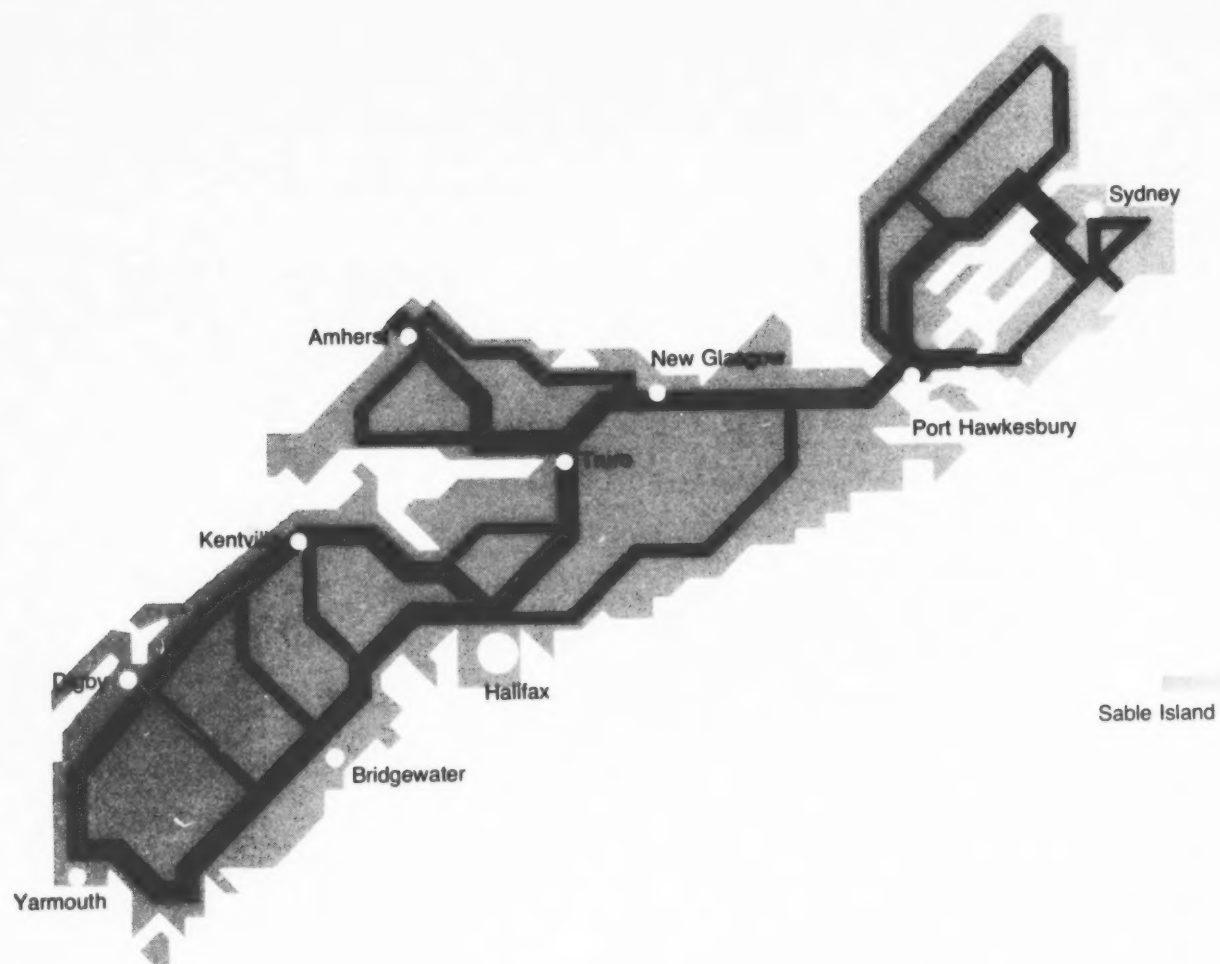
Shippers should make themselves aware of the commodities that are eligible and ensure that they are adequately described on the bills of lading to enable the carrier to apply the subsidy reduction and receive compensation from the NTA. Where appropriate, bills of lading should be notated to the effect that the goods have been manufactured in the Atlantic Region and are eligible for selective subsidy." Shippers and receivers should also scrutinize their freight bills to ensure that they have received the benefit of the subsidy, where applicable.

For more specific information on the ARFA program, including commodity eligibility and levels of westbound assistance, contact the Atlantic Provinces Transportation Commission, Suite 210, 236 St. George Street, P.O. Box 577, Moncton, New Brunswick E1C 1W1, telephone (506) 857-2820, FAX 506-857-2835.

Highways Map

100 Series
(Major Highway)

Trunk Routes



Port of Halifax

Halifax Harbour is one of the world's deepest ports (70 feet, or 21.3 metres, at low water). It is sheltered, spacious, and ice-free. The port has a large inner harbour and a well-developed outer harbour with several deep water berths, some privately and some publically owned. The port is entered directly from the Atlantic at any level of tide. Navigation in the harbour is not impeded by a river channel, locks, or other navigational restrictions.

Located some 600 nautical miles (1111 km) northeast of the Port of New York, Halifax has unique geographic features readily apparent on a global map. Its strategic location qualifies Halifax as an ideal port-of-call for container lines serving the eastern coast of the United States and Canada. Diversion in terms of time and distance is negligible, enabling container lines to serve both markets with their largest vessels. In 1988, cargo movements through the port totalled 16.3 million tonnes, of which 3.5 million tonnes was containerized general cargo. This throughput translated into over 350,000 TEUs. There are over 30 shipping lines calling on the Port of Halifax. More world ports are served from the Port of Halifax than from any other port in Canada.

In 1987, 59 cruise ships with some 25,000 passengers visited the port and in 1988 that figure jumped to about 150 cruise vessels.

Autoport, owned by a subsidiary of CN Rail, located on 100 acres just outside the City of Dartmouth, commenced operations in 1971 and was designed specifically to meet the high standards of the automotive industry. Autoport has developed into one of North America's largest automotive terminals, handling over 115,000 import and domestic vehicles annually. It is the leading automobile distribution centre in Canada, with as many as 70 ships calling annually, and provides facilities and services for 18 automotive companies.

Strait of Canso Port

The Strait of Canso lies on the Atlantic coast between the Island of Cape Breton and the Nova Scotia mainland with access to the Gulf of St. Lawrence. The main harbour, which is ice-free, has a limiting depth of 27 m (88.6 feet), is 1.5 km (.93 miles) wide, and is 20 km (12.4 miles) long.

The economic base of the Strait of Canso is a combination of primary industries and an integrated complex of heavy industry, a deepwater port, and offshore supply base operations. Beyond marine transportation, the port is linked to major markets and supply sources by transcontinental rail service, major highway networks, and a municipal airport.

The Strait of Canso is one of the best deep-water and ice-free ports on the east coast of North America. This, combined with the availability of prime industrial land at water's edge, makes the area a likely site for industrial activity related to fabrication, gas processing, bulk storage, and transshipment of bulk commodities such as coal, gravel or ores.

The port has been utilized by Super Collier Vessels, which can be topped-off from a self-unloader loaded in Sydney by using mid-stream transfer technology.

Sydney Harbour Ports

The three-port harbour system offers a deep, sheltered, Y-shaped, 15 square mile (38.8 km²) area that is open year-round for shipping activities. On occasion, drift ice may be encountered in the harbour area and ice-breaker assistance is available if necessary.

The controlled depth is 38 feet (11.6 m) at lowest normal tides, with average rise and fall from 3-5 feet (9-1.5 m). The land-locked harbour provides safe anchorage for a large number of any-size vessels with depths ranging from 40-60 feet (12-18 m). Tugs are not necessary to dock large vessels.

The Sydney Harbour Ports has the edge on many other port facilities. Not only is the harbour open year-round for commerce, but a skilled labour force is able to provide quick turnaround time to save both time and money. One of the most important advantages is its central and strategic location to other ports throughout the world and to the Great Circle Route from Europe. The port complex at Sydport is used for bulk handling, containers, ro-ro cargo, heavy lifts, cruise liner terminal, Canadian Coast Guard College Operations, and open storage. Over one million tonnes annually of coal is exported through the port to markets in Europe, Scandanavia, Brazil, and the Far East.

The three-port system is also a terminus of Canadian National Railways, and regional airlines such as Air Nova, Air Atlantic and Air St. Pierre. CN Marine operates a daily passenger and freight ferry service to Newfoundland.

Table 7-1. Container Ship Services Between the Port of Halifax and World Ports

<u>Destination</u>	<u>Container Line</u>	<u>Destination</u>	<u>Container Line</u>
United Kingdom and Continent		Marsa	
Antwerp	ABC/ACL/H-L/ML/OOCL	Marseilles	NL
Bremerhaven	ACL/H-L/ML/OOCL/POL	Mersin	ABC/NL/ZIM
Felixstowe	ABC/ML/OOCL	Naples	NL
Gothenburg	ACL	Palermo	ZIM
Gydnia	POL	Piraeus	ZIM
Hamburg	ABC/ACL/H-L	Teheran	NS/NL/ZIM
Iceland	EIMSKIP	Trieste	NL
LeHavre	ACL/H-L/ML/OOCL/POL	Tripoli	ZIM
Liverpool	ACL/H-L	Velencia	NL
Rotterdam	ACL/H-L/ML/POL	Venice	CCL/EV/ML/ZIM
Scandinavia	ML/POL		ZIM
Caribbean, Bermuda, and Central America		Middle East, Indian Subcontinent	
Bermuda	BCL/LB	Abu Dhabi	HL/NS
Dominican Republic	NPR	Bahrain	N-L/ML
Haiti	NPR/SCTT	Bombay	Hoegh/ML
Kingston	ZIM	Cochin	Hoegh
Port-au-Prince	ZIM	Colombo	Hoegh
Port of Spain	ZIM	Damman	H-L/ML/NS
San Juan	NPR/ZIM	Doha	ML
Santo Domingo	ZIM	Dubai	H-L/ML/NS
Trinidad	NPR/SCTT	Indian Subcontinent	CGM/"K"/NOL/OOCL
Tobago	NPR	Jeddah	H-L/Hoegh/ML/NS
U.S. Virgin Islands		Jubail	H-L/ML/NS
and Leeward Island	NPR	arachi	ML
		Kuwait	H-L/ML
		Middle East	CGM
		Muscat	H-L/ML
		Yenbu	NS
Mediterranean/Black Sea		Africa	
Alexandria	NL/ZIM	Abidijan	BWA/ML/ZIM
Alicante	ZIM	Africa	CGM
Algeciras	ML	Banana	DL
Barcelona	ZIM	Boma	DL
Baghdad	NL	Cabinda	DL
Beirut	NL	Dakar	BWA/DL/ML
Benghazi	NL	Dar-Es-Salaam	ML
Bilbao	ML	Doula	BWA/ML
Cadiz	ZIM	Freetown	BWA/DL/ML
Constanza	ZIM	Lagos	BWA/ML/ZIM
El Brega	NL	Las Palmas	DL
FOS	CCL/EV/ML	Lome	ML
Genoa	ML/NS/NL/ZIM	Matadi	DL
Haifa	ZIM	Mombassa	ML
Iskenderun	NL	Monrovia	BWA/ML/ZIM
Istanbul	NL	Pointe Naire	DL
Koper	ZIM	Port Harcourt	ZIM
Lattakia	NL	Soyo	DL
Leghorn	ABC/CCL/EV/ML/ZIM	Tema	BWA/ML/ZIM
Leixos	ML	Tenerife	DL
Limassol	NL		
Lisbon	ML/NL/ZIM		

(continued on page 7.9)

Table 7-1. (continued from page 7.8)

<u>Destination</u>	<u>Container Line</u>	<u>Destination</u>	<u>Container Line</u>
Japan/Far East, Southeast Asia		Yokohama	NS/NOL
Bangladesh	ML	Australia/New Zealand	
Bangkok	ZIM	Auckland	ABC/ACT/CL/OSC/Scan
Belawan	Hoegh	Australia	EuroPacific/K/NOL/OOCL
China	ML/NOL/OOCL	Brisbane	ACT/CL/Scan
Hakata	NS	Dunedin	ABC
Hong Kong	K/ML/NOL/OOCL/ZIM	Tremantle	ABC/OSC
Inchon	ZIM	Melbourne	ABC/ACT/CL/OSC/Scan
Indonesia	K/ML/NOL/OOCL	New Zealand	EuroPacific
Jakarta	Hoegh	Port Chalmers	ACT/CL
Japan	K/ML/OOCL	Sydney	ABC/ACT/CL/OSC/Scan
Kaohsiung	K/NOL/ZIM	Wellington	ACT/CL
Keelung	Hoegh/NS/ZIM		
Kobe	NS/NOL/ZIM	Intercoastal (Canada and United States)	
Korea	ML/OOCL	Baltimore	ACLK/H-L/ML
Macau	ML	Boston	H-L/UM
Malaysia	K/NOL/OOCL	Charleston	ML
Manila	ZIM	Corner Brook, Nfld.	At Sea
Nagoya	NS/ZIM	Houston	ZIM
Osaka	ZIM	Los Angeles	ML/ZIM
Padang	Hoegh	Miami	ML/ZIM
Panjang	Hoegh	New York	ACL/H-L/ML/ZIM
Palembang	Hoegh	Norfolk	H-L/ZIM
Phillipines	K/ML/NOL/OOCL	Portsmouth	ACL/H-L
Pusan	K/NS/NOL/ZIM	Philadelphia	H-L
Singapore	ABC/Hoegh/K/ML/NS/NO L/OOCL/ZIM	San Francisco	ML/ZIM
Sri Lanka	ML	Savannah	ZIM
Surabaya	Hoegh	St. John's, Nfld.	At Sea
Taiwan	ML/OOCL	St. Pierre and Miquelon	St. Pierre Ro/Ro
Thailand	K/ML/NOL/OOCL		
Tokyo	ZIM		

Source: Halifax-Dartmouth Port Development Commission, Port of Halifax Bulletin, November 1988

Legend

ABC	ABC Containerline	Hoegh	Hoegh Line
ACL	Atlantic Container Line	"K"	K-Line
ACT	Associated Container Transportation/P.A.C.E. Line	LB	Lloyd Bermuda (via Hapag-Lloyd)
At Sea	Atlantic Searoute	ML	Maersk Line
BCL	Bermuda Container Line (via ACL)	NL	Nordana Line
BWA	Barber West Africa Line (via ACL)	NOL	Neptune Orient Line
CCL	Costa Container Line	NPR	Navieras de Puerto Rico
CGM	CGM (via ACL)	NS	National Shipping Co. of Saudi Arabia
CL	Columbus Line	OOCL	Orient Overseas Container Line
DL	Dafra Line	POL	Polish Ocean Lines
EV	Evergreen	SCTT	Shipping Corp. of Trinidad and Tobago
H-L	Hapag-Lloyd	ZIM	ZIM Container Line

Table 7-2. Major Air Services Available To and From Halifax International Airport

CANADIAN AIRLINES - DIRECT FLIGHTS

<u>Departures from Halifax to:</u>		<u>Arrivals to Halifax</u>	<u>Flying Time</u>
Boston	2/day	2/day	1 hr. 35 min.
Toronto	8/day	8/day	2 hrs. 25 min.
Montreal	5/day	5/day	1 hr. 30 min.
Ottawa	3/day	3/day	1 hr. 34 min.
New York	2/day via Boston	2/day via Boston	-
Los Angeles	3/day via Vancouver	3/day via Vancouver	-
Amsterdam	1 direct/week	1 direct/week	5 hrs. 45 min.
Amsterdam	1/day via Toronto	1/day via Toronto	-
Winnipeg	1/day	1/day	5 hrs.
Edmonton	2/day	2/day	6 hrs. 30 min.

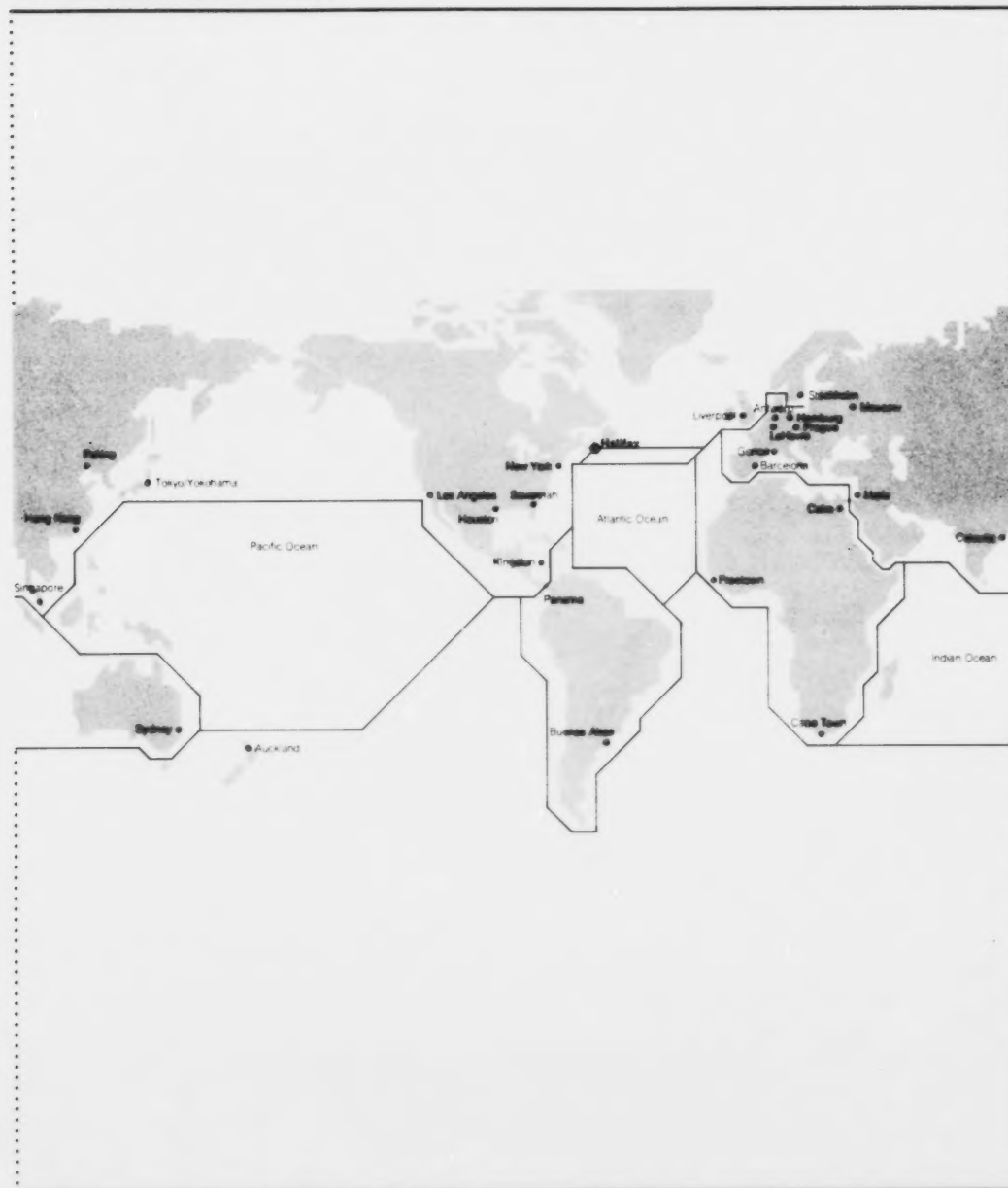
AIR CANADA - DIRECT FLIGHTS

<u>Departures from Halifax to:</u>		<u>Arrivals to Halifax</u>	<u>Flying Time</u>
Boston	4/day	4/day	1 hr. 27 min.
Toronto	6/day	6/day	2 hrs. 16 min.
Montreal	6/day	6/day	1 hr. 30 min.
Ottawa	3/day	3/day	1 hr. 42 min.
New York	6/day via Montreal	6/day via Montreal	-
Los Angeles	3/day via Toronto	3/day via Toronto	-
Winnipeg	3/day	2/day	5 hrs. 38 min.
Edmonton	2/day	2/day	7 hrs. 15 min.
Vancouver	2/day	2/day	7 hrs. 43 min.
London, England	2/week	2/week	6 hrs. 50 min.

INTERNATIONAL AIR COURIER SERVICES AVAILABLE

Air International Courier Service
Express Air Canada Cargo
Canadian Air Cargo
Federal Express
Day & Ross Air Freight

International Markets Map



Halifax to:	Nautical Miles	Kilometres					
New York	600	1119	Hamburg, West Germany	2923	5417	Calcutta	9295 17207
Savannah	1164	2157	LeHavre, France	2573	4768	Tokyo/Yokohama	10021 18571
Kingston, Jamaica	1795	3326	Barcelona, Spain	3189	5910	Hong Kong	11057 20491
Buenos Aires	5731	10621	Genoa	3527	6536	Singapore	9603 17796
Stockholm, Sweden	3723	6899	Caro (Port of Said)	4800	8525	Sydney, Australia (via Panama)	10012 18554
Liverpool, England	2441	4524	Freetown (Sierra Leone)	3399	6299	Auckland, New Zealand	8849 16399
Antwerp	2761	5116	Cape Town	6490	12027	Los Angeles (via Panama)	5252 9733

Source: 1961 Canadian Ports and Seaway Directory Distances Between Ports 1964.

8 Industrial Parks

Industrial Parks and Malls..... 8.1

Industrial Parks Map..... 8.2

Industrial Parks and Malls

Industrial Parks

Serviced land, at a reasonable cost, is available throughout Nova Scotia for establishing and expanding industry.

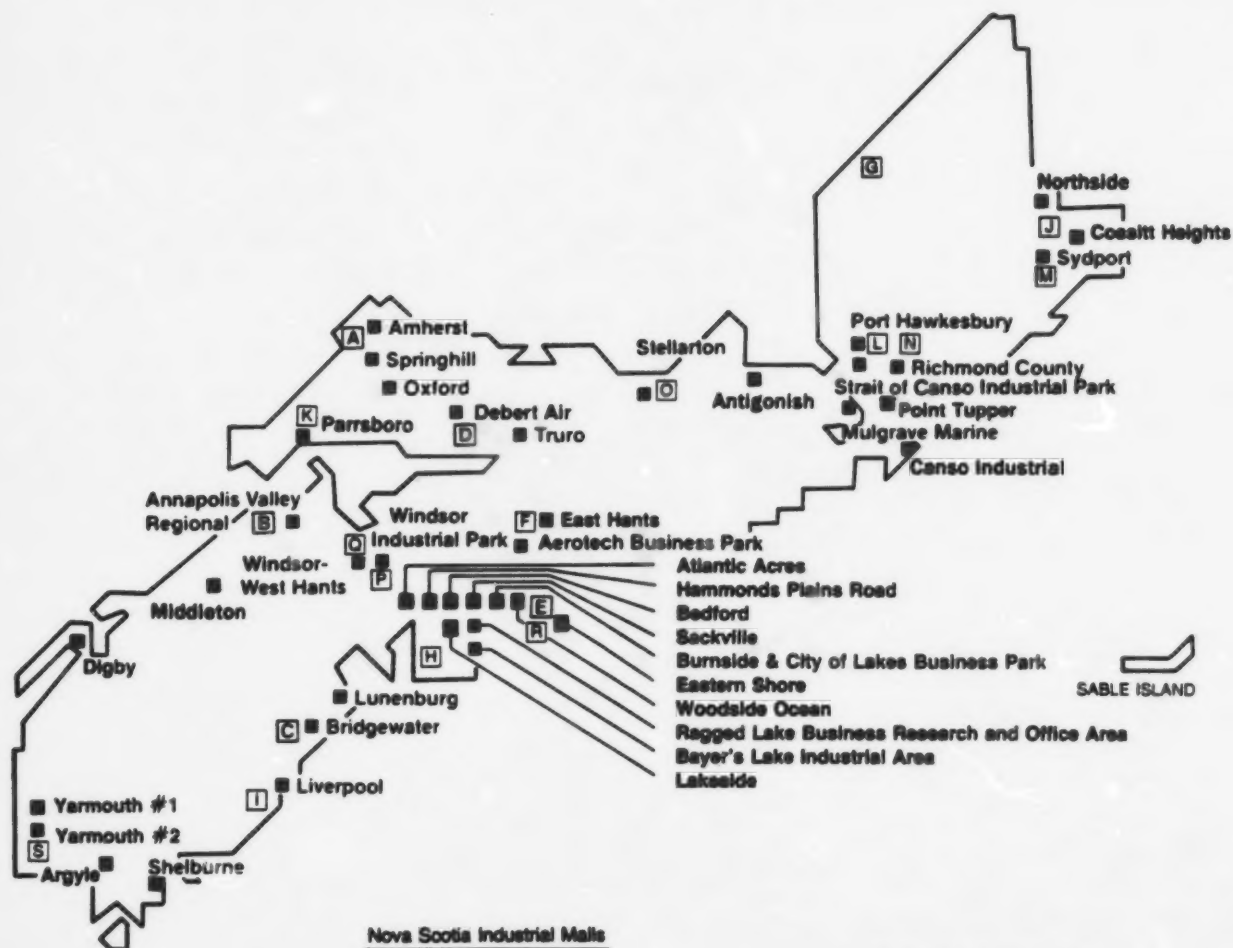
There are 40 well-placed industrial parks in Nova Scotia—14 provincially-owned and the remainder being privately-, municipally-, or federally-owned. There are approximately 6,250 acres of fully serviced land with an additional 20,000 acres of unserviced land banked throughout the province. Land prices are in the \$8-12,000 per acre range in smaller urban areas and in the \$45-80,000 range in the Halifax-Dartmouth metropolitan area.

More specific information about all industrial parks is available upon request. The Department of Industry, Trade and Technology has access to an annually updated computerized Industrial Parks Database containing 115 relevant variables/characteristics of every industrial park in the province. This data base is also available "online" from a private vendor.

Industrial Malls

To further encourage the establishment of new manufacturing and processing enterprises in the province, the Nova Scotia Business Capital Corporation has constructed several incubator malls. For those tenants who qualify for occupancy and assistance, a rental subsidy is available. This assistance decreases gradually over a maximum period of four years, at which time tenants are expected to construct or move to their own facilities to make room for new enterprises.

Industrial Parks Map



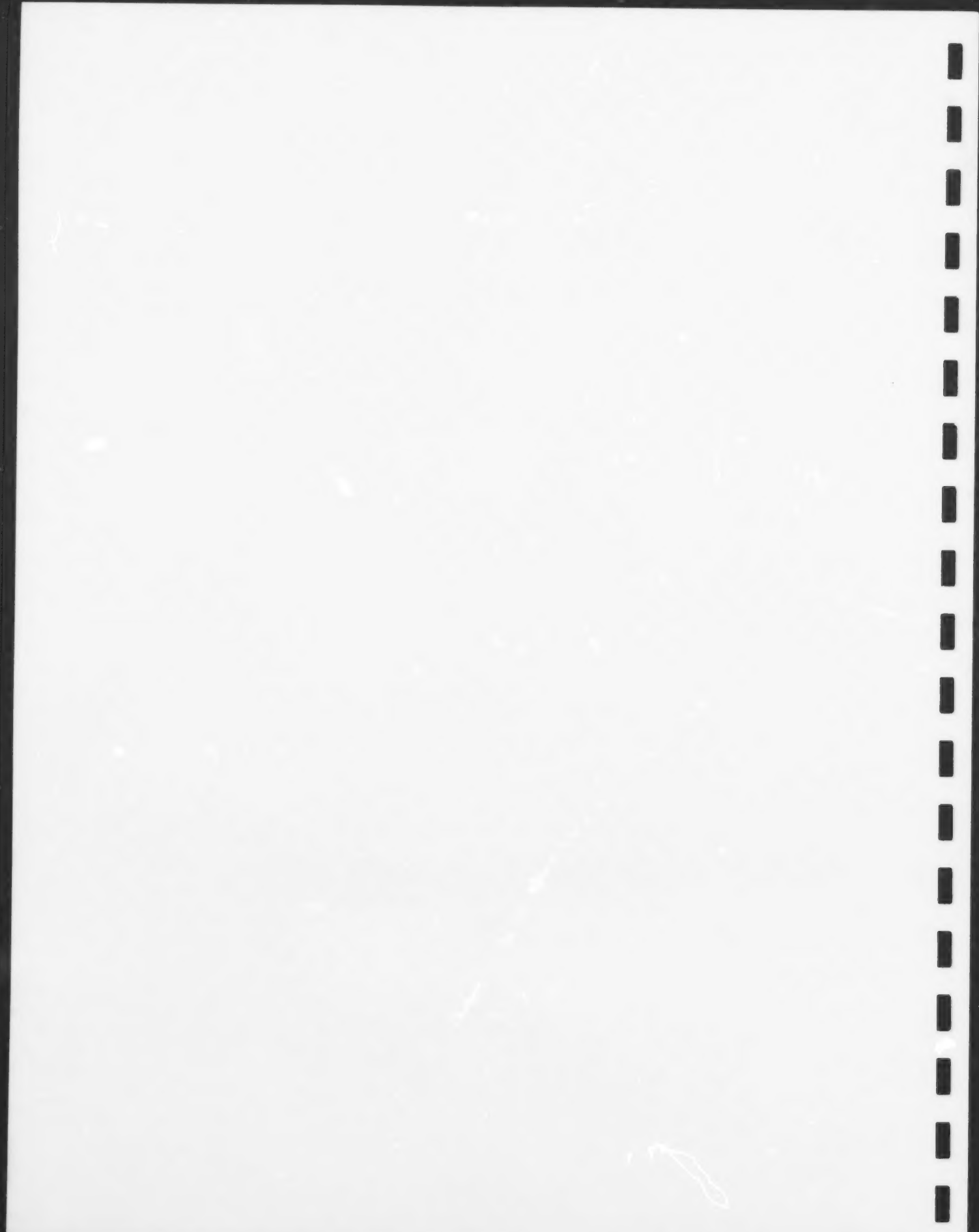
Nova Scotia Industrial Malls

- A Amherst Industrial Mall
- B Annapolis Valley Regional Industrial Mall
- C Bridgewater Industrial Mall
- D Debert Air Industrial Mall
- E Eastern Shore Industrial Mall
- F East Hants Industrial Mall - Elmdale
- G Inverness Village Mall
- H Lakeside Industrial Mall
- I Liverpool Industrial Mall

- J Northside Industrial Mall
- K Parrsboro Industrial Mall
- L Port Hawkesbury Industrial Mall
- M Ocean Industrial Mall-Sydport
- N Richmond County Industrial Mall
- O Stellarton Industrial Mall
- P Windsor Industrial Mall
- Q Windsor-West Hants Industrial Mall
- R Woodside Technology Innovation Centre
- S Yarmouth Industrial Mall

9 Research and Development and Education Facilities

Research and Development Facilities.....	9.1
Education Facilities.....	9.10
Universities and Colleges.....	9.11
Technological Institutes.....	9.11
Community Colleges.....	9.12
Vocational Training.....	9.16
Management Training.....	9.17



Research and Development Facilities

Nova Scotia has approximately 4,000 research personnel employed in universities, corporations, research institutes and government.

This gives it one of Canada's foremost concentrations of research scientists. It also makes it one of the largest ocean science centres in the world. The unique feature of this concentration, most advantageous to the industrial sector, is the effective integration of research effort among university personnel and laboratories.

At the core of this vital research complex are:

- the Bedford Institute of Oceanography
- the Defense Research Establishment
- the National Research Council Regional Laboratory
- the Nova Scotia Research Foundation Corporation

These institutions utilize university facilities, particularly those at Dalhousie University and the Technical University of Nova Scotia.

Nova Scotia is also *the Canadian centre for marine research* and this is reflected in the fact that the province's 250 marine scientists account for over one-third of all such scientists in Canada. Approximately \$300,000,000 for marine sciences has been invested in physical facilities to date and operating expenditures are in the order of \$40,000,000 a year.

These and other scientific facilities throughout the province create important research and development activity, stimulating and assisting manufacturing and processing industries.

The following are several of the scientific facilities throughout the province involved in research and development activity, stimulating and assisting manufacturing and processing industries.

**Atlantic Research Laboratory
National Research Council Canada
Halifax, Nova Scotia**

The Atlantic Research Laboratory is one of many National Research Council facilities across the country. It is located on the Dalhousie University campus in Halifax, Nova Scotia and also operates an aquaculture research station on the Atlantic coast near Sambro, Nova Scotia.

The Atlantic Research Laboratory was established in 1952 to perform research important to industries of Canada and the Atlantic provinces. The laboratory's Industrial Liaison Office works with industry to help transfer technology and assists companies in gaining access to the Canada-wide network of NRC researchers. Collaborative projects with industrial companies, universities, government laboratories, and other research institutions are actively pursued.

Laboratory research is conducted in the fields of biology, biochemistry, and biotechnology, as well as organic, physical, and analytical chemistry. In addition, work is carried out in the field of new industrial materials, particularly advanced structural ceramics.

The Atlantic Research Laboratory supports a wide range of highly specialized state-of-the-art equipment and facilities.

Capabilities include:

- high-performance liquid chromatography
- atomic absorption spectroscopy
- scanning electron microscopy
- infra-red spectrophotometry
- plasma emission spectroscopy
- nuclear magnetic resonance spectrometry
- mass spectrometry
- x-ray diffraction
- fermentation and processing
- high-temperature furnaces
- isostatic presses
- powder and particle analysis

The research program is divided into:

- marine biosciences
- biological chemistry
- analytical chemistry
- industrial materials and processes

Bedford Institute of Oceanography
Dartmouth, Nova Scotia

The Bedford Institute of Oceanography (BIO) was founded in 1962 as Canada's first federal research centre devoted to the field of oceanography. A wide range of research and survey activity is undertaken by the scientists, technicians, and other specialists of BIO.

Eastern Arctic and Atlantic waters off Canada's coasts are the principal working areas for the BIO fleet, but many have ventured further afield. One institute vessel, the CSS Hudson, became the first ship to circumnavigate the Americas during the famous Hudson '70 Expedition.

The several components of the Bedford Institute share a common mission to contribute to the knowledge and understanding of the marine environment and its resources, principally off Canada's Atlantic seaboard and in eastern Canada's Arctic. The scientific scope of the Institute's research has grown to embrace physical, chemical, geological, and geophysical studies of the oceans, as well as biological and fisheries studies. The marine survey role covers both navigational charting and natural resource mapping. In terms of both the size and scope of its programs, the Bedford Institute of Oceanography ranks as one of the major oceanographic research institutes in the world.

**Nova Scotia Research
Foundation Corporation**
Dartmouth, Nova Scotia

The Nova Scotia Research Foundation was established in 1946 by the Province of Nova Scotia to "assist in the economic development of Nova Scotia by promoting, stimulating, and encouraging the effective utilization of science and technology by industry and government."

Three operating divisions—Applied Science, Industry Services, and Product Development—carry out approximately 4,000 assignments each year.

Applied Science Division

- Biology
- Geophysics
- Analytical chemistry
- Coal technology

Industry Services

- Field advisory service
- Project services
- Materials
- Corrosion

Product Development Division

The electronic and mechanical engineering design and manufacturing skills of the Division are used to support and encourage the development of specialized industrial hardware suitable for manufacturing in Nova Scotia and competitive in world markets.

Projects range from providing information to helping a company solve an immediate

technical problem to carrying out substantial research and development projects related to new industrial opportunities. The Corporation's activities can be grouped into two approximately equal parts—assisting industry in the solution of today's technical problems and development of new products/processes in response to tomorrow's opportunities. While the Corporation uses its capabilities to serve all sectors of Nova Scotia's economy, particular emphasis is placed on technological support for the secondary manufacturing industry. The Corporation continues to emphasize the potential for ocean industry development in Nova Scotia.

Kentville Research Station Kentville, Nova Scotia

The Kentville Research Station is responsible for research on poultry, winter cereal and horticultural crops, food processing, and storage technology.

Poultry studies aim to improve efficiency of production, working with genetic, nutritional, and physiological factors.

Winter cereals research mainly concerns the wheat crop and is aimed at developing regionally adapted cultivars and intensive management systems.

Horticultural crops research is the largest single program at the station and includes studies on breeding and management as well as integrated control of diseases, insects, and weeds in orchard and berry crops, fresh and processed vegetables, green house and ornamental nursery crops.

The food processing research program emphasizes improved processing technology, new product development, and food quality. Storage studies concentrate on systems and environments that help to extend the marketing season. The award-winning, ultra energy-efficient "K Series" food blanching system was an offshoot of this program.

Dalhousie University
Halifax, Nova Scotia

Dalhousie University is a nondenominational coeducational university founded in 1818. The University is a member of the Association of Universities and Colleges of Canada, the Atlantic Association of Universities, and the Association of Commonwealth Universities. Dalhousie benefits from a variety of arrangements for teaching and research collaboration with hospitals and federal and provincial research laboratories because of their close proximity to the University.

The business community in the region has access to a pool of faculty resources in the School of Business Administration. The School can provide:

- An evaluation of accounting information.
- Up-to-date information on capital budgeting, lease/buy choices, operating capital management.
- Market research.
- Advice on plant layout, maximization of machine utilization, quality control, and inventory control systems.
- Consultation services in aspects of human resource management.
- International business specialists who can offer guidance on how to obtain entry to export markets, finance export projects, and formulate strategies for international business.

The University also has major strengths in ocean-related studies, ranging from the law and politics of the sea to oyster farming. Through the Ocean Studies Program, expertise is available to the private and public sector who require specific studies and/or research into commercial, legal, and environmental aspects of marine affairs and offshore activity.

The Department of Oceanography has capabilities for conducting oceanographic field work and analysis, testing of special oceanographic gear, and undertaking limnological and technical projects. All of this is backed-up with a unique resource—one of the most up-to-date seawater research facilities in North America. The Department of Biology is well equipped with aquarium rooms and constant environment growth chambers. These marine science facilities are ideally suited to the fishery whether it's squid, oysters, or lobster. The department also trains students in marine biology. There is also valuable expertise in the areas of marine transportation, environmental impact assessment, and resource economics.

Dalhousie also offers services to industry in the following:

- Biochemistry
- Chemistry
- Economics
- Geology
- Mathematics
- Microbiology
- Physics
- Computer Sciences and many more

**Technical University
of Nova Scotia (TUNS)
Halifax, Nova Scotia**

The principal and unique role of the Technical University of Nova Scotia is to provide a comprehensive centre of excellence in the fields of technical professions: architecture, computer science, and engineering. TUNS and its research staff are prime carriers of technology transfer and performers of industrial R&D in the Province of Nova Scotia. The University operates the following centres and institutes.

Applied Microelectronics Institute

The applied Microelectronics Institute is a centre of excellence, bringing together a major portion of the microelectronics research and development efforts of the Technical University of Nova Scotia, Dalhousie University, and the Nova Scotia Research Foundation Corporation.

Technical activities of the Institute are carried out in two broad areas—Industrial Projects and Research. Technical support for these activities is provided by the Engineering group and by two main facilities—a Computer Centre and a Computer-Aided Design System supporting printed circuit board manufacturing technology and integrated circuit design.

***Atlantic Industrial
Research Institute***

The Atlantic Industrial Research Institute is a self-supporting research institution located on the campus of the Technical University of Nova Scotia. The aims of the Institute are to encourage, coordinate, direct, and administer programs and contracts of engineering and industrial research for public and private industry in the Atlantic Provinces.

Contract research is undertaken by the Institute on a wide variety of engineering or architectural projects.

Biomedical Engineering Institute

The Biomedical Engineering Institute was established jointly by the Technical University of Nova Scotia and Dalhousie University in late 1984.

The objectives of the Institute are as follows.

1. To use the collective academic resources of the two universities to offer in-depth education in Biomedical Engineering at the masters and doctorate degree level.
2. To act as a catalyst in promoting interdisciplinary and collaborative research between researchers in engineering, clinical medicine, basic medical science, physics, and mathematics.
3. To promote the growth of local industry to develop, manufacture, and market the medical devices and instrumentation which are products of the biomedical research laboratories at the two universities.

Canadian Institute of Fisheries Technology

The Canadian Institute of Fisheries Technology was established at the Technical University of Nova Scotia as part of its thrust toward the creation of applied research centres and engineering. The Institute is a specialized resource centre for graduate education and research in fish process engineering and seafood science. As a government-approved centre for advanced technology, it also provides R&D services on a cost-recovery basis to industry and to various governmental and international agencies. By fostering fisheries R&D in cooperation with industry and government, the Institute promotes technology transfer and the development of advanced technology aimed at more effective commercial utilization of fishery resources, and offers unique opportunities for graduate training and research. Major areas of emphasis are aquaculture technology, food biochemistry, fats and oils, food process engineering, and seafood technology.

Centre for Energy Studies

The Centre for Energy Studies was established to provide a focus for energy education and research at the University.

The Centre has been involved in cooperative projects with governments, industry, and consultants. Work in such diverse areas as fluidized bed combustion, alternate fuels preparation and combustion, gasification of wood, on-site boiler and furnace efficiency monitoring, vehicle emissions, and solar energy has been undertaken.

The Centre has a number of specialized facilities unique in Eastern Canada. These include a semi-industrial scale cylindrical test furnace, complete with in-flame measurement probes and instrumentation for characterization of the combustion and heat transfer characteristics of various fuels; small-scale atmospheric fluidized bed combustors; small-scale and pilot-scale circulating fluidized bed units. A major research program on heat transfer, combustion, and emission control in circulating fluidized beds is underway. The Centre also has an off-campus laboratory complex which specializes in fire research, gas and dust explosions, and undergraduate teaching in combustion. A calorimeter room for use in determining the efficiency of wood and peat burning devices is also housed at the off-campus laboratory. The Centre maintains a mobile combustion testing laboratory for off-campus work.

Centre for Water Resources Studies

The objectives of the Centre are to help in the coordination of research related to water resources within the University, encourage the contribution of the Technical University to national and international research, and act as a link between researchers and practicing engineers in the Atlantic Region.

Research programs directed by the Centre include the use of roofwater cisterns for domestic water supply, the design of alternative on-site septic disposal systems, soil erosion processes, acid mine drainage, treatment of landfill leachate, and the computer modelling of hydrodynamic and hydrochemical processes.

***Computer-Aided Design/Computer-Aided Manufacturing
(CAD/CAM)Centre***

CAD/CAM technology is a highly adaptable methodology for improving design, production, and distribution processes. Its application can significantly improve quality and productivity and allow a greater level of management control throughout the manufacturing process.

The University, by concentrating its effort in the CAD/CAM Centre, contributes substantially to the improvement of productivity by conducting research and the education/training of engineering and others in the applications of CAD/CAM.

To enhance the education/training activities, the Centre has acquired the full PLATO library of courses and the computer-managed instruction capabilities. The CAD/CAM Centre engages in five broad areas of activity to deliver this technology to industry:

1. Promotion of CAD/CAM Applications.
2. Hands-on Demonstration and Instruction.
3. Pay-As-Use Service
4. Research and Development
5. Information Dissemination

Minerals Engineering Centre

The Minerals Engineering Centre was established by the Technical University of Nova Scotia from the Laboratory for the Investigation of Minerals, formerly part of the Atlantic Industrial Research Institute. The Minerals Engineering Centre is intended to provide research, analytical, and advisory services to industries, universities, and government bodies in Atlantic Canada.

The services offered include:

- Sample preparation of ores, soils, silts, rocks, cores, and clay fractions.
- Size analysis, including screening, sieving, and subsieve analysis.
- Dense liquid analysis.
- Preparation of thin sections.
- Physical and chemical analytical methods using atomic absorption, spectrographic and wet chemical techniques.
- Analysis of samples including geological, metalliferous ores, industrial minerals, coals, metals, alloys, and water.
- Mineral processing test work.

Vehicle Safety Research Team

The Vehicle Safety Research Team (VSRT) is one of ten university-based teams located across Canada. These teams operate on a nonprofit basis under contract to Transport Canada (Surface) and were established to provide in-depth investigations (Level 3) of automotive investigations.

The VSRT has special research interests in casual factor evaluation methods, in

computer-aided accident reconstruction, in data base management and modular analysis procedures, particularly in relation to injury severity and injury-casual factors.

*Advanced Materials
Engineering Centre (AMEC)*

A consortium of private sector and university interests is establishing a \$9.0 million centre to design products made of advanced industrial materials: composites, ceramics, superplastics, structurally modified metals, and semiconducting compounds.

The Centre, opened in September 1988, reflects the complementary abilities of: Grumman Corporation, a major U.S. aerospace contractor; General Composite Technology Limited, a new Nova Scotia company specializing in advanced materials; and the Technical University of Nova Scotia, leaders in the development of protective coatings for space and other environments.

Education Facilities

Educational institutions are built on a strong tradition. Nova Scotia provided one of the first free public school systems in Canada and started some of the earliest universities. Today, Nova Scotia has 14 universities and degree-granting colleges which offer, collectively, a complete range of undergraduate and postgraduate academic disciplines required for entry into any type of business and/or profession.

Specialized academic schools include medicine, dentistry, engineering, education, social work, architecture, art and design, law, business administration, and other studies such as oceanography and theology.

Technical institutes offer students the opportunity to develop expertise in electronic, electrical, mechanical, civil, chemical, agricultural, and mineral technologies as well as ocean-related specializations such as marine engineering or navigation.

Today, tax-supported elementary and secondary school systems serve every community in the province. This enables public education in Nova Scotia to commence at age 5 with primary grade and continues through grade 12 for a total of 13 years. In addition, government assistance is available for post-secondary technical or academic education.

Adult education is popular and successful in Nova Scotia. An integral part of the education system in Nova Scotia is a program by local school authorities, universities, and colleges to provide continuing education in academic, technical, and cultural subjects. This program, assisted by the Provincial Department of Education, complements the education process. This program is indicative of Nova Scotians' desire to update their skills and knowledge on an ongoing basis.

Table 9-1. Universities and Colleges in Nova Scotia, 1988

Acadia University, Wolfville
Atlantic School of Theology, Halifax
Dalhousie University, Halifax
Mount Saint Bernard College, Antigonish
Mount Saint Vincent University, Halifax
Nova Scotia Agricultural College, Truro
Nova Scotia College of Art and Design, Halifax
Nova Scotia Teachers' College, Truro
Saint Francis Xavier University, Antigonish
Saint Mary's University, Halifax
Technical University of Nova Scotia, Halifax
Université Sainte-Anne, Church Point
University College of Cape Breton, Sydney
University of King's College, Halifax

Table 9-2. Technological Institutes in Nova Scotia, 1988

Canadian Coast Guard College, Sydney
Cox Institute of Agricultural Technology, Halifax
Institute of Technology, Halifax
Nova Scotia Land Surveying Institute, Lawrencetown
Nova Scotia Nautical Institute, Port Hawkesbury and Halifax

Table 9-3. Nova Scotia Community Colleges, 1988

<u>Campus</u>	<u>P.O. Address</u>	<u>No. of Teachers</u>	<u>Enrollment</u>
Adult Vocational Training	10 Acadia Street, Dartmouth B2Y 4H3	27	250
Adult Vocational Training	P.O. Box 1042, Sydney B1P 6J7	30	265
Annapolis	P.O. Box 940, Middleton B0S 1P0	37	325
Burridge	372 Pleasant Street, Yarmouth B5A 2L2	36	301
College of Geographic Sciences	P.O. Box 10, Lawrencetown B0S 1M0	19	150
Cumberland	P.O. Box 550, Springhill B0M 1X0	23	166
Halifax Campus	1825 Bell Road, Halifax B3H 2Z4	41	513
Hants	P.O. Box 2079, Windsor B0N 2T0	17	171
I.W. Akerley Campus	21 Woodlawn Road, Dartmouth B2W 2R7	101	952
Institute of Technology	P.O. Box 2210, Halifax B3J 3C4	85	2,169
Lunenburg	75 High Street, Bridgewater B4V 1V8	36	394
Nautical Institute	P.O. Box 1225, Port Hawkesbury B0E 2V0	21	150
- subsidiary campus	P.O. Box 2086, Station M, Halifax B3J 3B7	10	150
Pictou	P.O. Box 820, Stellarton B0K 1S0	35	371
Shelburne	P.O. Box 760, Shelburne B0T 1W0	14	128
Strait	P.O. Box 2000, Port Hawkesbury B0E 2V0	41	351
Sydney	365 Prince Street, Sydney B1P 5L2	40	510
Associate Training Institutions			
Colchester Regional Vocational School	60 Lorne Street, Truro B2N 3K3	38	339
Kingstec Community College	P.O. Box 487, Kentville B4N 3X3	69	629
Memorial High	P.O. Box 300, Sydney Mines B1V 2Y5	22	483

Source: Nova Scotia Department of Advanced Education and Job Training, November 1988

Table 9-4. Graduates, Nova Scotia Community Colleges, 1988

<u>Course</u>	<u>Graduates</u>	<u>Course</u>	<u>Graduates</u>
Accounting.....	122	Industrial electrical.....	11
Accounting technology.....	15	Industrial electronic.....	7
Appliance repair.....	6	Industrial instrumentation.....	16
Banking and finance clerk.....	32	Industrial machinist.....	11
Bricklaying.....	38	Industrial mechanics	
Building technology.....	9	(millwrights).....	34
Business administration.....	61	Intermediate industrial.....	40
Business administration		Introductory electrical.....	16
technology.....	35	Machine shop.....	55
Business computer		Marine electronics.....	5
programming.....	21	Marine fitter.....	22
Business computer		Meat cutting.....	10
operations.....	26	Motor vehicle repair body.....	67
Cabinet carpentry.....	25	Motor vehicle repair	
Carpentry.....	104	mechanical.....	134
Clerk typist.....	54	Nursing assistant.....	166
Commercial banking.....	15	Offset printing.....	21
Cooking.....	59	Painting and wood finish.....	10
Cosmetology.....	165	Photography.....	14
Data processing.....	59	Plumbing.....	87
Denture technology.....	9	Quality control food tester.....	14
Dining room service.....	19	Receptionist.....	32
Drafting: architectural and		Refrigeration and	
mechanical.....	71	air-conditioning.....	19
Electrical construction		Retail merchandising.....	77
wiring.....	122	Retail sales.....	6
Electronics.....	80	Secretarial.....	202
Electronics, cable, and		Secretarial: dicta typist.....	10
industrial TV.....	7	Secretarial: legal.....	8
Farm equipment repair.....	11	Sheet metal.....	12
Food science technician.....	2	Small equipment repair.....	8
Forestry.....	17	Stationary engineer.....	28
Graphic design.....	16	Steamfitting-pipefitting.....	31
Heavy duty equipment repair.....	64	Stenography.....	26
Home health AIDE.....	7	Stockroom and receiving	
Horticultural maintenance		clerk.....	47
services.....	16	Welding.....	111
Hotel-motel-restaurant			
management.....	21	Total.....	2,665

Table 9-5. Enrollment, Institute of Technology, 1987-1988

<u>Course</u>	<u>Enrollment</u>
Post Secondary Courses	
Construction Administration:	
- first year.....	14
- second year.....	15
Dental Assisting (one year).....	37
Dental Technology:	
- first year.....	7
- second year.....	5
Electrical Engineering Technology:	
- first year.....	15
- second year.....	7
Electronics Engineering Technology:	
- first year.....	44
- second year.....	37
Mechanical Engineering Technology:	
- first year.....	14
- second year.....	14
Food Service Technology:	
- first year.....	10
- second year.....	12
Medical Lab Technology:	
- first year.....	59
- second year.....	47
Nuclear Medicine Technology:	
- first year.....	10
Petroleum Resources Technology:	
- first year.....	6
- second year.....	6
Total.....	359
Apprenticeship Courses	
Bricklaying: modular.....	55
Carpentry:	
- preemployment.....	10
- modular.....	330
Cooking:	
- preemployment.....	11
- modular.....	152
Electrical Construction: block release*	351
In-Plant.....	130
Lineman: block release.....	48
Machinist:	
- preemployment.....	15
- block release.....	40
Marine Fitter:	
- preemployment.....	16
- block release.....	7

(continued on page 9.16)

* Student apprentices involved in work-sharing in groups.

Table 9-5. (continued from page 9.15)

<u>Course</u>	<u>Enrollment</u>
MVR (Mechanical):	
- modular.....	132
- block release.....	37
Oil Burner:	
- preemployment.....	12
- block release.....	39
Plumbing: block release.....	100
Sheet Metal: block release.....	37
Sprinkler Fitter: block release.....	40
Stationary Engineers: block release.....	116
Total.....	1,678
Other Courses	
Automated Manufacturing Systems.....	59
Business Computer Programming.....	21
Computer Technology.....	10
Mini-Micro Computer Specialist.....	16
Pretechnology for Women.....	26
Total.....	132
Summary	
Post Secondary Courses.....	359
Apprenticeship Courses.....	1,678
Other Courses.....	132
Total.....	2,169

Vocational Training

There are three basic programs for vocational training in Nova Scotia:

Secondary Vocational

- A one or two year program for grade 9 graduates, full-time, sponsored by the Provincial Government. (There are 14 community colleges in various locations throughout the Province and one composite high school.)

Continuing Education

- A maximum one-year program of up-grading courses for adults, sponsored by the Government of Nova Scotia.

Adult Vocational Training

- Special development courses are made available to individuals selected by the federal Employment and Immigration Commission and/or by the Province for a term of up to one year.

Programs are developed to dovetail with specific employer needs, and in many cases, potential employers actively participate in developing course curricula.

Automated Manufacturing Technology Centre (AMTC)

The AMTC, located at the Institute of Technology, is the home of a world-class, state-of-the-art, computer-integrated manufacturing training facility that is without equal in North America.

It includes a complete integrated FMS (Flexible Manufacturing System) cell, a computer centre, and CAD/CAM, robotics, CNC (Computer Numerical Control) and microcomputer laboratories, as well as classrooms and support facilities.

AMTC training programs educate workers in various aspects of industrial automation. Although the application area chosen is metal cutting, much of the technology can be applied or adapted to most industries, from food processing to electronic assembly.

The AMTC offers three programs—Production Technology, Support Technology, and Machining Technics.

AMTC graduates are as adaptable as the systems on which they train. They enter the workplace trained to exact industry standards, highly skilled, and highly motivated. Able to bring responsiveness and efficiency to any computer-assisted manufacturing system, AMTC graduates are playing a major role in enabling Nova Scotia to compete in a high-performance automated working environment.

Management Training

**Advanced Management Centre,
Institute of Public Affairs,
Dalhousie University**

The Advanced Management Centre offers a comprehensive range of seminars and workshops aimed at enhancing managerial performance in the work situation. The Centre caters to students from business and industry by offering short, full-time courses which can be customized to meet the needs of a particular industry or company. Courses can be conducted on site in the local area.

In addition to the Management Development Program, the Advanced Management Centre serves the management community through its own special research projects, in-company training courses, program referrals, specialized library and consulting services.

**The Atlantic Regional
Management Training Centre,
Technical University of Nova Scotia**

Since 1962, the Management Training Centre, a nonprofit organization, has been supplying practical "how-to-do-it" management programs for supervisors, managers, and specialists. These programs are available in every area of the Atlantic Provinces in every type of business, industry, nonprofit organization, and government. The workshops, seminars, and courses are presented as general sessions, open to all, or exclusively for a company's personnel as an in-house training program. Some courses are customized to meet the needs of individual companies and even individual groups within the company. Helping senior managers and their staff to increase managerial knowledge and skills is their business. The programs offered and being developed are designed for each level of management, from firstline supervisors up, as well as for specialists either beginning their career or upgrading their knowledge and skills.

The following universities have schools of business which can provide extensive training in business management:

Dalhousie University
Saint Mary's University
Université Sainte Anne
Saint Francis Xavier University
University College of Cape Breton
Acadia University
King's College (Dalhousie)
Mount Saint Vincent
Mount Saint Bernard

10 Lifestyle in Nova Scotia

Lifestyle.....	10.1
Climate.....	10.3

Lifestyle

Living in Nova Scotia involves a unique combination of urban, rural and sea-centred activity. Few places in North America offer the variety of landscape and lifestyle available in this sea-side province.

There are festivals of all sorts every summer, from Scottish dancing to the Fishermen's Exhibition. And hundreds of "bed and breakfast" lodgings to make you comfortable, including many of the finest old houses in the province. There are quiet mornings to be spent cross-country skiing on Nova Scotia's many miles of wooded trails, and several fine slopes for those so inclined. There are perfect summer days for sailing on the ocean or inland lakes, or walking the streets of our small towns. There is salmon, trout and deep-sea fishing. There are informal suppers and friendly musical get-togethers in small towns throughout the province. Such events as the Nova Scotia Tattoo, the Antigonish Highland Games, the Apple Blossom Festival and the Buskers Festival have achieved international recognition and acclaim.

And there is much more, all of it easily accessible from any part of the province.



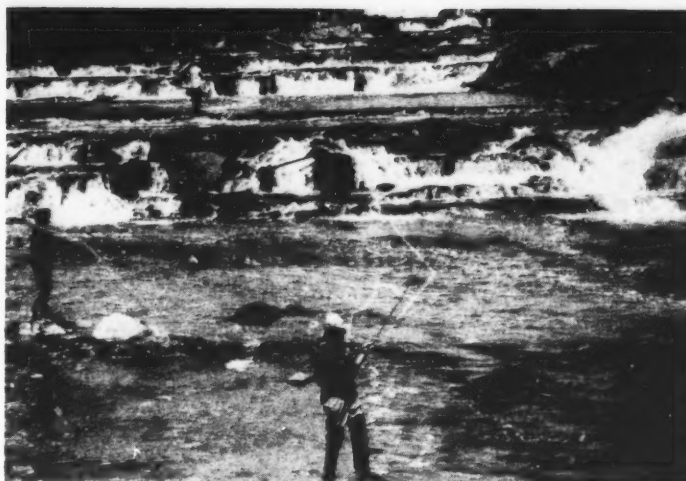
An efficient highway network connects the quiet backroads of Nova Scotian tradition to vital centres throughout the province, and no matter where you are, you're no more than a few hours' drive from a complete change of pace.

You might spend a relaxed evening in a bed and breakfast in the sea-sprayed town of Yarmouth on the province's southernmost tip, and the next day drive to Cape Breton on the other end of the province in time to watch a spectacular sunset over the mountains of the Cabot Trail. Or you could go shopping on the bustling streets of Halifax-Dartmouth and only hours later be canoeing on a secluded lake in Kejimikujik National Park.

In fact, one of the most attractive features of the province is the easy accessibility of the capital city of Halifax to and from the many rural communities throughout the province. Amenities include:

- Nova Scotia Symphony Orchestra
- Neptune Theatre (live)
- Art Gallery of Nova Scotia
- Nova Scotia Museum Complex
- Maritime Museum of the Atlantic
- Halifax Metro Centre (professional hockey and large stage performances)
- Rebecca Cohn Auditorium (medium-sized stage performances)
- Cunard Theatre
- Halifax Public Gardens (Victorian age setting)
- Point Pleasant Nature Park
- and many more attractions

And to cap it off, city dwellers can drive out and take a summer evening's stroll along an uncrowded beach, while many inhabitants of Nova Scotia's towns and rural communities take in an enjoyable evening at a Halifax theatre or restaurant.



Climate

Although Nova Scotia is Maine's neighbour, it has milder winters, much more like those in New Jersey, because of ocean currents. In the summer, when New Jersey gets quite hot, Nova Scotia stays as cool as northern Maine -- because of those same ocean currents! So, in a sense, it has the best of both worlds: mild winters, cool summers. And although Spring comes somewhat late, that is more than made up for by a Fall which can compete with any place in North America for spectacular colours and pleasant temperatures.

Looking in another direction, the climate in Nova Scotia resembles that of northern France and Germany.

In the high summer months of July and August, temperatures range from 86° F (30° C) to 60° F (15° C). And in the deep winter months of January and February, temperatures range from 32° F (0° C) to about 10° F (-12° C). Overall, a very pleasant range indeed!

Table 10-1. Environmental Statistics (Thirty-Year Average)

Temperature (°C)	January			April			July			October			Annual		
	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.
Halifax, Canada	-3.8	0.2	-7.7	4.0	8.1	-0.2	17.5	22.0	13.1	9.8	13.9	6.0	6.9	10.9	2.7
Toronto, Canada	-6.4	-2.1	-10.5	6.4	11.8	1.1	20.8	27.0	14.4	9.8	15.3	4.4	7.5	12.6	2.3
Chicago, U.S.A.	-3.3	0.5	-7.2	9.4	14.1	4.7	24.2	28.9	19.5	12.8	17.4	8.2	10.4	14.8	6.0
New York, U.S.A.	0.8	4.2	-3.5	10.6	15.2	6.1	24.8	29.3	20.4	14.7	18.8	10.7	12.6	16.7	8.5
Paris, France	3.4	6.0	0.9	11.0	15.8	6.3	19.5	24.6	14.5	11.7	15.6	7.9	11.5	15.5	7.5
Precipitation	January			April			July			October			Annual		
	Mean Prcp (mm)	Mean Rain (mm)	Mean Snow (cm)	Mean Prcp (mm)	Mean Rain (mm)	Mean Snow (cm)	Mean Prcp (mm)	Mean Rain (mm)	Mean Snow (cm)	Mean Prcp (mm)	Mean Rain (mm)	Mean Snow (cm)	Mean Prcp (mm)	Mean Rain (mm)	Mean Snow (cm)
Halifax, Canada	147.4	99.6	47.4	105.4	92.3	12.0	92.0	92.0	-	113.2	113.0	0.2	1381	1177	201
Toronto, Canada	55.6	22.8	35.0	64.6	57.2	6.8	75.0	75.0	-	55.6	58.2	0.8	752.0	621.8	133.4
Chicago, U.S.A.	N/A	113.2	23.8	N/A	163.3	2.0	81.0	81.0	-	74.2	73.2	1.0	N/A	842.8	972.8
New York, U.S.A.	N/A	84.1	17.2	N/A	90.6	2.0	94.2	94.2	-	85.6	85.6	-	N/A	1123.2	71.6
Paris, France	56			42			59			50			619		
Sunshine (Mean Hours)	January			April			July			October			Annual		
Halifax, Canada	110			176			220			155			1946		
Toronto, Canada	87			179			281			153			2045		
Chicago, U.S.A.	126			221			333			216			2611		
New York, U.S.A.	154			237			302			213			2677		
Paris, France	59			195			241			126			1840		

Source: Atmospheric Environment, Environment Canada, U.S. Weather Office Statistics.

Table 10-2. Environmental Statistics, Halifax, Nova Scotia (Thirty-Year Average)

Temperature	January		April		July		October		Annual	
	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial
Mean	-3.8°C	25.16°F	4.0°C	39.2°F	17.5°C	63.5°F	9.8°C	49.64°F	6.9°C	44.42°F
Maximum	0.2°C	32.72°F	8.1°C	46.58°F	22.0°C	71.6°F	13.9°C	57.02°F	10.9°C	51.62°F
Minimum	-7.8°C	17.96°F	-0.2°C	32.72°F	13.1°C	55.58°F	6.0°C	42.8°F	2.7°C	36.86°F
Precipitation	January		April		July		October		Annual	
	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial
Mean Precipitation	147.4 mm	5.8 in	105.4 mm	4.15 in	92.0 mm	3.62 in	113.2 mm	4.46 in	1381 mm	54.38 in
Mean Rainfall	99.6 mm	3.92 in	92.3 mm	3.63 in	92.0 mm	3.62 in	113.0 mm	4.45 in	1177 mm	46.34 in
Mean Snowfall	47.4 mm	1.87 in	12.0 mm	0.14 in	-	-	0.2 mm	0.008 in	201 mm	7.91 in
Sunshine (Mean Hours)	January		April		July		October		Annual	
	110		176		220		155		1946	